# Report on the American Workforce

U.S. DEPARTMENT OF LABOR
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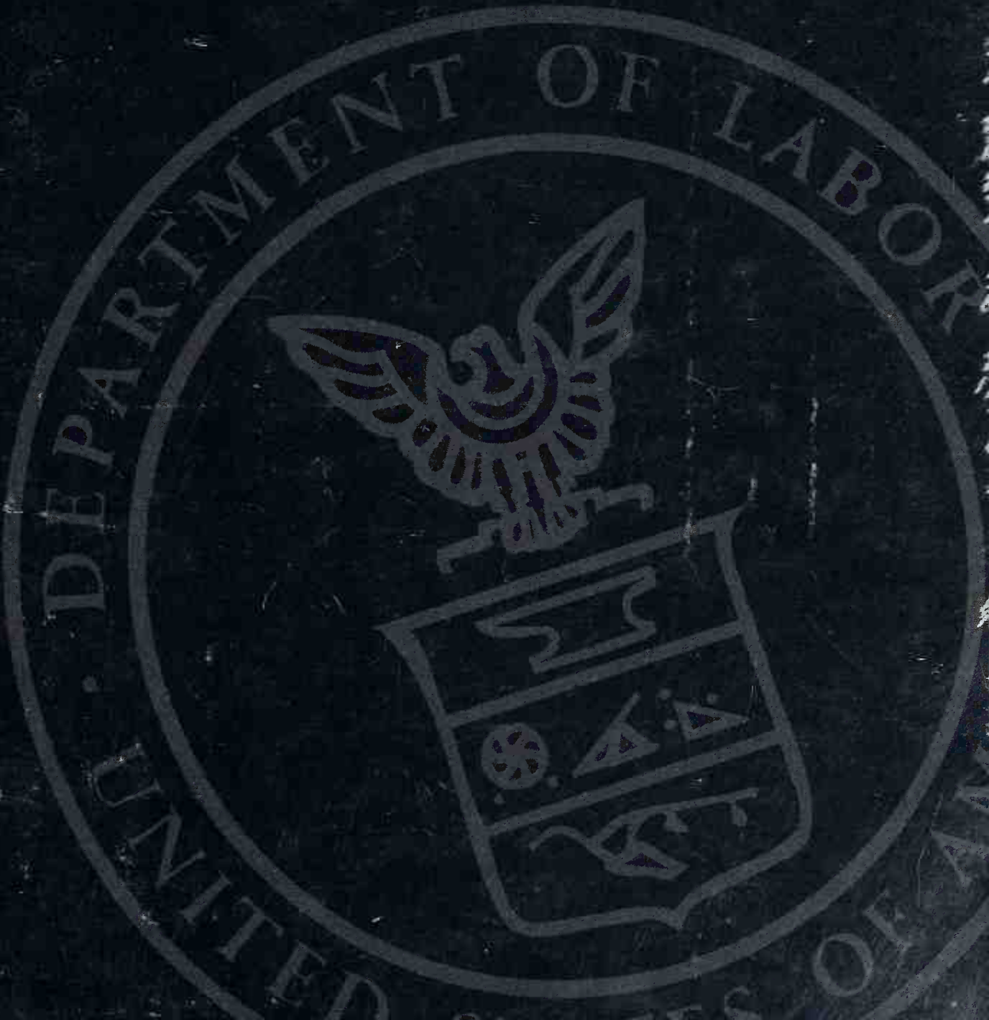

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U.S. Department of Labor
Elaine L. Chao, Secretary

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# Preface

This is the Department of Labor's fifth *Report on the American Workforce*. Previous editions appeared in 1994, 1995, 1997, and 1999. Each volume has provided a broad context for analyzing the issues faced by the Department of Labor, as it delivers on its mandate to prepare the American workforce for new and better jobs and to ensure the adequacy and competitiveness of America's workplaces. In this volume, the *Report* traces the broad outlines of the economy in the 20th century, its impact on the American worker, and the evolution of the statistical tools needed by policymakers, workers, employers, and researchers, as they embark on a new century.

The *Report's* outline and context is presented in the opening message from Secretary of Labor Elaine L. Chao. An introductory essay outlines the economic, technological, social, and business developments of the just-completed century. The three chapters explore, in turn, demographic change and demographic statistics, the evolution of compensation and compensation reporting, and economic structure and economic classification. A compendium of statistical tables completes the book. Katharine G. Abraham, Commissioner for the Bureau of Labor Statistics, established the strategic direction for this series of reports. Deborah Klein and Richard M. Devens provided overall direction for this year's volume.

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# Acknowledgments

The introductory essay outlines the progress of the American worker over the course of the 20th century. This piece also suggests the degree to which our understanding of the workforce, as result of refined statistics, improved substantially during the century. The introduction was written by Donald M. Fisk.

Chapter 1 describes the important changes in the composition of the American population and workforce that are the result of immigration and internal migration, particularly the movement of African American workers out of the South. These changes have driven the continuing development of methods for classifying demographic data to track the economic status of a growing variety of groups in the population. The authors of the chapter on minority measurement are N.Clyde Tucker; Geoffrey D. Paulin; Howard N Fullerton, Jr.; Thomas M. Beers III; Terry M. McMenamin; Abraham T. Mosisa; Sharon R. Cohany; and Howard V. Hayghe.

The second chapter chronicles the evolution of compensation practices over the course of the 20th century and the continuing efforts to capture these practices in useful statistical data. The components of compensation continue to evolve. Variable pay benefits—such as profit sharing and stock options—are growing in importance; and other benefits, such as family care and health promotion programs have emerged. The authors of chapter 2 are Thomas Moehrle, Jordan Pfuntner, Richard Schumann, Albert Schwenk, Robert Van Giezen, Michael Horrigan, William Goodman, and Michael Cimini.

Chapter 3 describes the structural evolution of the economy and the concomitant development of systems of industrial and occupational classification. Though not often visible, economic classification schemes are critical in determining how well statistics reflect the true workings of the economy. The chapter's contributors were Daniel Hecker, Jerome R. Pikulinski, and Norman C. Saunders. The authors wish to acknowledge the assistance of the History Staff of the Bureau of the Census, U.S. Department of Commerce.

The *Report* was edited by Monica Gabor, Daniel Houlder, and Monica Carpio and was designed and composed by Margaret Jones, Phyllis Lott, Dorothy Williams, and Bonita Boles, under the direction of Monica Gabor.

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# Message from the Secretary of Labor

The American workforce has gone through many changes in the last century, none more striking than the way we work. At the beginning of the previous century, wages were low, and the Nation did not even measure unemployment. Today, BLS measures almost every aspect of the American labor force. The 20th century was, as Ben Wattenberg put it, "The First Measured Century."

This volume looks at the information we now know through these new measurements, examining three of the major 20th century changes in the compilation of labor statistics. The first chapter focuses on important changes to the composition of the American population and workforce, as enormous waves of immigration during the last century both augmented the labor force and challenged mechanisms of the labor market. Chapter 2 examines the evolution of compensation practices over the course of the 20th century, as workers' compensation packages evolved from a simple pay envelope at the end of the week to a complex set of cash payments and benefits. The final chapter of this report describes some of the efforts to measure structural changes that affected the economy, as industries and occupations changed throughout the century.

Thanks in part to these new measuring tools, the 20th century has been one of the most productive and dynamic centuries ever. But the 21st century promises to be even more exciting and enterprising for the American workforce. With all of the changes to come, America's 21st century workforce needs to do more than simply adjust to the new economy. To succeed in the 21st century, our Nation must be prepared to *embrace* the changes in our economy—in how we work, where we work, and how we balance our professional and family lives.

I believe that the Department of Labor should lead the way in anticipating and reacting to changes, thus helping all workers to have as fulfilling and financially rewarding careers as they aspire to have. To this end, we have created a new Office of the 21st Century Workforce. The office's mission is to provide all American workers with the opportunity to equip themselves with the tools necessary to succeed in their careers and in whatever field they choose in this new and dynamic global economy.

That does not mean we should change everything. We still need to protect workers' safety and health, retirement security, and equal access to jobs and promotions. But we also need to be open to new and better ways to achieve those goals, taking into account how Americans actually work today.

I want us to focus as a Department on three issues that will determine our Nation's economic strength in this century, and shape the quality of life for America's working families:

*The skills gap.* Our economy is making an unprecedented transition into high-skilled, information-based industries. This has created a disconnect between the jobs that are being created and the current skills of many workers.

*Our demographic destiny.* In just a few decades, we will have a growing class of retirees and a shrinking workforce. In addition, there will be an increasingly diverse group of Americans entering the workforce, bringing with them the need for truly new ways of organizing and managing work.

*The future of the American workplace.* Anyone can tell you that this is not our parents' economy. The average 34-year-old has already worked for nine different companies in his or her brief career. Around 10 million people work away from their corporate office at least 3 days a month. As people sort out the new priorities of financial needs and family life, they all face the same new concerns: A career move that leaves behind health care coverage; abandoning pension benefits before they are vested; renegotiating with each new employer the balance between work and home.

In this new century, BLS will continue to provide us the tools needed to face these challenges. With enlightened leadership, the private, public, and nonprofit sectors, working together, can develop innovative solutions to ever-more-complex labor market problems. Leadership will make us a nation open to the talents of all our people—including those who have been left out of the workforce until now. Ultimately, informed leadership will make our training programs effective "venture capital" for the 21st century workforce.

ELAINE L. CHAO
Secretary of Labor

# Introduction

The 20th century was a remarkable period for the American worker, as wages rose, fringe benefits grew, and working conditions improved. Even though many statistics were sketchy at the beginning of the century, the picture is clear: The American workforce was much better off at the end of the century than it was at the beginning. And the statistics used to understand the condition of working Americans also improved over the course of the century, as we discuss in this *Report on the American Workforce*.

Comparison of the American workforce at the end of the 20th century, with that at the beginning, shows numerous changes. Some of these are dramatic; others less so. Many of these changes are well known, but some are not. In certain cases, statistical data are lacking to make quantitative comparisons between the beginning and end of the century; but most of the changes are discernible, nevertheless.

The size of the Nation's workforce increased roughly six fold during the 20th century. The workforce registered 24 million in 1900 with those aged 10 and above reporting a gainful occupation;[1] in 1999 it was 139 million (aged 16 and older).[2] But it is not just the sheer numbers that are striking. The composition, compensation, workplace, and very nature of work also changed during the century.

Over the course of the 20th century, the composition of the labor force shifted from industries dominated by primary production occupations, such as farmers and foresters, to those dominated by professional, technical, and service workers. At the turn of the century, about 38 percent of the labor force worked on farms. By the end of the century, that figure was less than 3 percent. Likewise, the percent who worked in goods-producing industries, such as mining, manufacturing, and construction, decreased from 31 to 19 percent of the workforce. Service industries were the growth sector during the 20th century, jumping from 31 percent[3] of all workers in 1900 to 78 percent[4] in 1999.

The labor force composition shifted in other ways, too. Female participation in the labor market grew dramatically in the 20th century. In 1900, only 19 percent[5] of women of working age participated in the labor force, whereas 60 percent[6] of them did in 1999. Furthermore, there was a marked change in female occupational employment. In 1900, only 1 percent of the lawyers and 6 percent of the Nation's physicians were women.[7] In 1999, the figures were 29 percent for lawyers and 24 percent for physicians.[8]

Child labor was common at the turn of the century, and many families needed the income earned by their children to survive. The 1900 census counted 1.75 million individuals aged 10 to 15 who were gainful workers.[9] At that time, these children comprised 6 percent of the labor force. There were no national laws that governed child labor, and while some States enacted and enforced such laws, most did not. By 1999, Federal and State law regulated child labor; and Federal law effectively prohibited full-time workers under the age of 16.

Statistics are sparse on minority participation in the labor force at the turn of the century, even by the standards of the day. Using the terminology of the day, census data show that the nonwhite workforce numbered a little under 3.8 million in 1900. This was about 14 percent of the labor force.[10] In 1999, the black workforce numbered 16.5 million, or about 12 percent, of the labor force.[11] There were also American Indians, Japanese, and Chinese in the labor force at the turn of the century, but their numbers were few compared with the Negro.[12] By 1999, the other minority groups had increased, but blacks remained the largest racial minority group, as we discuss in chapter 1 of this report.

In 1900, per capita income (in 1999 dollars) was $4,200; it was about $33,700 in 1999.[13] The average hourly pay of manufacturing production workers in 1999 was $13.90; in 1909, the first measured year, it was about $3.80 (in 1999 dollars).[14] In addition to wages and salaries, benefits comprised a major part of employee compensation at the end of the 20th century. Statistics show that benefits averaged $5.58 per hour—or 27.5 percent of total compensation—in 1999.[15] (Benefit data are not available for the beginning of the century, but benefits were minimal—if available at all—to workers in the industrial economy.) One compensation series shows that benefits accounted for a little more than 1 percent of total compensation in 1929, the first year measured.[16] Wages and salaries improved during the course of the century, although in *real* terms they seem to have leveled off during the last quarter of the century. If total compensation—wages, salaries and benefits—is examined, the trend remains positive.

The average workweek dropped dramatically during the 20th century. In 1900, the average workweek in manufacturing was 53 hours,[17] and in 1999 it was about 42 hours.[18] But the decline was not steady, as the workweek is very sensitive to business conditions. During the great depression, the average number of hours per workweek for production workers in manufacturing dropped as low as 34.6. During World War II, it rose to 45.2 hours at one point. After the War, it stabilized at about 40 hours per week. The normal range for the four decades after World War II was 39 to 41 hours per week, but the factory workweek exceeded 41 hours for most of the 1992-1999 period.[19]

The number of hours at work varies by industry sector, as well as in response to the state of the economy. In 1999, the weekly average for the total private sector was 34.5 hours; and the average for the total goods-producing sector was 41.0 hours. The retail trade sector average workweek was 29 hours, wholesale was 38.3, construction was 39.1, and mining was 43.8. Average retail trade hours, for example, have shown a fairly constant drop since 1947, as industry added more part-time workers.[20] Mining hours, on the other hand, rose over that period. Workweeks in some sectors, such as manufacturing and construction, are impacted by changes in the economy; and many sectors, including retail trade and construction, are affected by seasonal changes.

Workplace safety improved dramatically during the 20th century. Almost 1,500 workers[21] were killed in coal mine accidents in 1900. However, in 1999, the figure[22] was 35. And it was not just coal mines that were unsafe. There were 2,550 railroad workers[23] killed in 1900, compared with 56 in 1999.[24]

These two industries were picked because of data availability, as fatality statistics are not available for most industries at the turn of the century. Moreover, injury data are not available at the beginning of the century for *any* industry. Some national injury data were collected in 1911, but detailed statistics were not available until later in the century. Whether accidents are fatal or not, statistics indicate that they are less common, and the workplace is a much safer place, for the worker at the end of the century than at the beginning.

If an employee was injured on the job in 1900, his only recourse for compensation was to sue for damages. Such lawsuits were generally unsuccessful. It is estimated that at that time only 15 percent of workers injured on the job were successful in obtaining any damages under common law.[25] By 1999, there were a number of government programs that assisted those injured on the job. Long-term disability payments, Worker's Compensation, and other provisions in statute or contracts provided safety nets for the worker in 1999 that did not exist in 1900.

Unemployment is estimated at 5 percent[26] in 1900; in 1999 it averaged 4.2 percent.[27] While these two figures are not much different, they reflect very different dynamics. Data from four States—California, Kansas, Maine, and Michigan—and the 1910 census suggest that workers around the turn of the century faced a high probability of being laid off or unemployed sometime during the year. But the length of time one was unemployed was likely to be shorter than it was at the end of the century.[28] In 1999, the median duration of unemployment was 6.4 weeks.[29]

There were 19 business cycles in the 20th century.[30] As a result, the century experienced periods of very low unemployment and periods of extremely high unemployment. Between 1900 and 1908, the unemployment rate fell below 3 percent. Later in the century, rates above 8 percent were recorded during recessions, such as those in 1915, 1921, 1975, and 1982. The highest rates of unemployment came during the Great Depression, when there were rates above 20 percent for several years. In 1933, there were more than 12 million workers unemployed; and the unemployment rate averaged 24.9 percent. More recently, double-digit unemployment rates were recorded during parts of 1982 and 1983, but there was a fairly steady decline from 7.8 percent in mid-1992 to 4.1 percent at the end of 1999.[31]

## Forces of change

What forces underlie the changes of the workforce in the 20th century? Technology, capital, demography, immigration, education, and government intervention are often mentioned. In most cases, it is impossible to point to a single force or action that led to changes in the workforce. Most changes reflect the confluence of several factors or events.

Technology entered the workplace in a massive way in the 20th century. The list of technological improvements in the workplace in the last century is almost endless: Communication devices, measuring devices, computer controlled equipment, the x-ray, wind tunnel, arc welder, circuit breaker, transistor, geiger counter, laser, neon lamp, teletype, fiber optics, stainless steel, and the atomic clock. The list goes on and on. At the turn of the century, only 5 percent of the Nation's factories used electricity to power their machines.[32] However, by the end of the century, electrical powered machines were ever present; and heating, air conditioning, and air filtration were common in the workplace. And technological improvements often resulted in improved safety in the workplace, as technology replaced the worker in some of the more dangerous tasks.

Additionally, technological improvements that entered the home in the 20th century led to major changes in the workplace, as more homemakers were able to shift some of their time from home production to paid jobs. At the same time, new industries were created to serve the home; and existing industries expanded. Electricity was in less than 10 percent of the Nation's homes at the turn of the century, but it was almost universal by the end of the century.[33] New machines introduced in the home in the 20th century included the refrigerator, dishwasher, clothes washer, dryer, iron, vacuum cleaner, microwave oven, automatic toaster, electric razor, and electric hairdryer. In addition, there was prepackaged food, frozen food, and a host of other convenience items. The list could extend for many pages. Expansion of the paid workforce was certainly facilitated by these labor-saving goods and devices that were introduced into the home in the 20th century.

Likewise, technological improvements have worked their way throughout the economy. Medical advances have extended the life span of individuals and have led to fewer and less severe illnesses, allowing workers to work longer with less debilitating illnesses. Those injured on the job were more likely to return to work sooner. There was a host of new drugs and medical procedures; and new contraceptives facilitated family planning, especially impacting women workers. Major changes in transportation, primarily the use of the automobile, led to massive shifts in the location of the workplace. Factories were resettled to areas of cheap land and built on single levels. No longer were factories tied to the city. The explosion of communications permitted further dispersal of the workplace. The automobile also led to dispersion of the home and shopping. Computers were a major factor in the economic growth of the last decade of the 20th century, but the overall importance of computers in the economy and workplace will not be known for decades.[34]

To put the new technology to work often required massive amounts of capital. In 1996, for example, investment in information technology per worker was $29,200 for telecommunications; $7,600 for real estate; and $4,600 for railroads.[35] While real capital input increased 3.8 percent per year between 1948 and 1998 for the private sector, information equipment and software increased 11.4 percent per year; and computers and related equipment software increased 27.8 percent per year.[36] In 1999, the economy consumed over one trillion dollars of fixed capital. Without capital, technology would not have made its way into the workplace.

Changes in the demographics of the population in the 20th century had a profound impact on the workplace. The population aged, became more diverse, and grew dramatically. In 1900, the life expectancy of a newborn was 47.3 years;[37] in 1999 it was 77.0.[38] In 1900, 80 percent of American children had a working father and a stay-at-home mother, however, by 1999, that figure was only 24 percent.[39] The population at the beginning of the century was 76 million, but approached 280 million by the end of the century. (The official 1999 Census count is 273 million, but the 2000 Census counted 281 million).[40]

Immigration was crucial to the development of the U.S  economy and the workplace in the 20th century. In 1900, 448,572 individuals passed through immigration control, and for the decade as a whole (1900-9) there were 8.2 million.[41] Those of work age had come to find employment and a stake in a better job. Most were laborers or listed no occupation on their entry documents.[42] (Recent numbers are only slightly larger and, as a proportion to the overall population, a great deal smaller.) In 1998, there were 660,477 legal immigrants; and for the decade as a whole (1990-99), there were close to 10 million.[43] During the 1930s and 1940s, in contrast, immigration dropped to less than 100,000 per year, as a result of the strict quota system established under the National Origin Act of 1929. But the Immigration and Naturalization Act of 1965 removed racial quotas and opened the doors to a large number of non-European immigrants. Immigration laws had a major impact on the labor force, as discussed at length in chapter 1 of this report. Indeed, one observer suggests "that quotas restricting the less-skilled immigrant labor were the single most important piece of labor legislation in the twentieth century."[44]

However, it was not just immigration that changed the workplace in the 20th century. Education played an important role in the advancement of the individual worker, the workforce, and the economy; and during the 20th century, there was a steady increase in educational attainment. In 1900, less than 14 percent of all Americans graduated from high school.[45] By 1999, that figure had increased to 83 percent.[46] In 1910, the first year for which estimates are available, less than 3 percent of the population had graduated from a school of higher learning.[47] By 1999, the figure was 25 percent.[48] Furthermore, increased education resulted in substantial monetary payoff for the individual worker. Men with college degrees earned 62 percent more and women 65 percent more in hourly compensation than did those with a high school degree, at the end of the century [1997].[49] A substantial part of the growth of the economy is attributable to increased education.[50]

There is no question about the increasing role of government during the 20th century.[51] But what impact did government intervention have on the workplace and on the workforce? This question is not easily answered. Even when there was workplace legislation, one cannot ascribe changes in the workplace to changes in the law. As one observer notes, "government intervention often reinforced existing trends, [such as in the case of] the decline of child labor, the narrowing of the wage structure, and the decrease in the hours of work."[52] In addition to workplace legislation, there was legislation directed at larger societal issues that had a dramatic impact on the workplace.

A number of pieces of legislation dealt with the workforce and workplace in the 20th century as discussed in chapters 1 and 2. In addition, there was general societal legislation that had an impact on the workforce and the workplace, although the focus of the legislation was elsewhere. Social insurance legislation, such as Social Security and Medicare, had a profound affect on the workforce and workplace, by providing many workers a retirement stipend and health insurance for the first time. Other legislation that had a profound impact on the workforce includes the 1990 Americans with Disabilities Act, the post-World War II GI Bill, and the Civil Rights Act. Studies show that the Civil Rights Act of 1964, specifically Title VII, had an important affect on hiring of black workers.[53] Other actions that impacted the workforce indirectly include the funding and building of the interstate highway system, funding of research and development, and enforcing patent and copyright laws.

## Counting the changes

Much of what we know about the improvements in the workforce came from the advancements that were made in counting the workforce in the 20th century. Important developments came in methodology and data gathering. In addition, there was a major expansion of the data collection effort. Here, we briefly touch on some of these improvements and the underlying forces that set the stage for these developments. Details are discussed in the chapters of this report.

Statistics are often lacking on the American workforce at the beginning of the 20th century, as noted numerous times in this report. On the whole, data cited in this paper for the first part of the century are drawn from decennial census data or estimates by economic historians. Workforce data, for the first part of the century, are restricted largely to special studies that addressed subjects like child labor, immigrant labor, and pensions. Rudimentary statistics were produced on wages and hours in manufacturing in 1904, but these series were discontinued in 1908 for more investigative reporting, as discussed in chapter 2 of this report.[54]

Wage and hours surveys were resumed in 1913, but resources permitted only 10 industry studies every other year.[55] These studies focused on industries, or industry groups, such as cotton, wool and silk. For each study, data were collected and published on hourly wage rates, full-time weekly earnings, fluctuations in employment during the year, volume of employment, and productivity. In 1916, the Bureau of Labor Statistics (BLS) began to publish monthly employment series for five industries.[56] This was the start of the establishment series on employment and payrolls.

Gaps in labor force statistics became apparent, with the mobilization for World War I. Federal statistics were "woefully incomplete and inadequate" according to Bernard Baruch, Chairman of the War Industries Board.[57] Wartime needs led to a massive expansion of statistical data. Prices and wages were of immediate concern, since wage rates needed to be adjusted to keep pace with inflation. In 1918, wage and hour surveys were expanded to 780 occupations in 28 industries, covering 2,365 establishments in 43 States.[58] There was also increased interest in information on strikes and lockouts. With the termination of the war, statistical budgets were trimmed, and the wage and hour program was reduced to its prewar level.

The next surge of interest in labor statistics came in the latter part of the 1920s. By 1927, there was monthly reporting of employment on 54 manufacturing industries covering 11,000 establishments; and in 1928-29, agriculture, mining, construction and trade were added to the reporting. Several studies addressed the issue of how to collect unemployment statistics, a continuing and unresolved issue at that time.[59]

The Great Depression provided the next great push to improved labor force statistics. Modern-day employment statistics, unemployment statistics, occupational statistics, and the like grew out of the Great Depression. The creation of the Central Statistical Board, in 1933, led to a number of new statistical initiatives. One created the Interdepartmental Committee on Industrial Classification, in 1937, that resulted in the creation of the Standard Industrial Classification (SIC) system. As discussed in chapter 3 of this report, this was the first time that the United States had produced a comprehensive industry classification system. Until that point, industry data collection was pretty much ad hoc, responding to immediate needs and what could be collected, given the time and available funding. The result was different data definitions and overlapping data collection. The SIC underwent four major revisions before being replaced in 1997 by the North American Industry Classification System (NAICS).

The Great Depression spawned a number of new laws, such as the Fair Labor Standards, which required new statistics on the labor force. Collection of unemployment statistics remained an unresolved issue in the 1930s. After many studies—and false starts—a household survey was undertaken; and national unemployment estimates were produced, for the first time, in 1940. In 1938, as discussed in chapter 3, the Central Statistical Board and the American Statistical Association moved to develop an occupational classification system that reflected the similarity of work, education requirements, skill levels, and socioeconomic class. This new classification was used in the 1940 census and the development of the Occupational Outlook Program. With the outbreak of World War II, the statistical focus changed from recession and depression to wartime needs.[60]

There was need for greatly expanded labor force statistics in World War II, as in World War I. United States statistical data collection and analyses shifted to focus on defense industries and the wartime economy. Wages and prices were controlled, and many items were rationed. At the beginning of the war, employment and wage data were collected on 90 industries; at the end of the war, data were collected on 180 industries. New defense-related industries sprung up overnight.[61] There was need for detailed, recurring data on price and wage changes. Occupational wage studies were expanded and refocused on the occupational skills needed by private industry to meet military needs. In order to set and control wages, wage reports were broken down by area and occupational group. Thousands of interplant wage inequity cases had to be heard and resolved, which required additional labor force information. The Cost of Living Index became a contentious political issue during the Second World War, because it was used to adjust and set wages. Basic issues, including changes in the quality of products and substitution affects, were the same ones that continue to torment developers of these indexes today. In 1945, the name of the index was changed to the Consumer Price Index.[62] The World War II era also saw the expansion of productivity studies and monthly reporting of industrial injuries.

Statistical data collection and reports were cut back following the conclusion of WWII; in fact, BLS staff was cut by 40 percent.[63] Data collection activities that remained were redirected from wartime to post-war problems. At about the same time, the Council of Economic Advisers and the Joint Economic Committee were created. Almost immediately, these two organizations focused attention on gaps in workforce data, leading to further changes in data collection and analysis. Worker budget estimates were revised and calculated for large cities, benefit studies were undertaken, and industry productivity studies were re-instituted. In 1948, General Motors and the United Auto Workers agreed to use the CPI to establish a wage-escalator clause, which gave new emphasis to the CPI, at a time when there was serious thought in cutting back funding of the index.[64] Occupational studies initially focused on veterans' re-entry into the labor force; later, studies reverted to their prewar focus of providing data for counseling young people in their choice of careers.

With the advent of the Korean War, there were demands to update much of the statistical program, especially the price and wage statistics which were needed to set price and wage guidelines. A revised CPI was instituted; and collective bargaining agreements were tracked, summarized, and published. The Wage Stabilization Board used the wage data to establish guidelines.[65]

The Vietnam War did not require the massive development of new data, as had the earlier wars of the 20th century. But the so-called "War on Poverty" introduced a whole new set of statistical requirements for information on the poor, unemployed, and minorities. The 1963 Vocational Education Act required the States to develop information on future occupations. This led to the development of occupational statistics by industry.[66] Many of the revisions and improvements in data did not take place until the 1970s, when new income support and training laws prompted more detailed reporting. The President's Concentrated Employment Program led to a series of studies on employment in poverty areas, and BLS introduced a quarterly series that tracked the situation in poverty areas in the United States. The Comprehensive Employment and Training Act of 1973 required information on unemployment and poverty by detailed geographic area.[67] This was also a period when inflation was a major economic and political issue, and the Cost of Living Council was established to provide guidelines on wage and price escalation that put renewed emphasis on price, wage and productivity statistics.[68]

The rest of the 20th century saw continuing improvement of workforce statistical data. These changes were evolutionary. While the decennial census collected data on occupations, it was not until 1977 that the first Standard Occupation Classification manual was published. As discussed in chapter 3, the manual grew out of the Bureau of the Budget's Office of Federal Statistical Policy and Standards initiative to develop a single occupational classification system that would be used by all major U.S. statistical organizations. It was at this time that occupational statistics were updated through a series of industry studies, and an industry-occupation matrix was developed for the first time. These statistics were necessary ingredients to the preparation of the industry and occupational projections. But this was not all. There were revisions in the industry and occupational classifications, as discussed in chapter 3, and additional minority and demographic data collected, as discussed in chapter 1. Wage data has also undergone major expansion to capture total compensation, as discussed in chapter 2. In 1980, the Employment Cost Index included benefits for the first time; and indexes were calculated and presented by occupational group and major industry.[69]

### What comes next?

Chapter 1 is a discussion of the changing demographics of the workplace in the 20th century. This is followed, in chapter 2, by a discussion of workplace compensation, how it evolved, and how it was measured in the 20th century. Finally, chapter 3 addresses, in some depth, the development of industry and occupational classification, how it developed in the 20th century, and where we stand today.

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# Endnotes

[1] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 11-25, p. 127.

[2] See *Employment and Earnings*, January 2000, p. 10.

[3] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 152-66, p. 138.

[4] See Census Bureau, *Statistical Abstract of the United States: 2000*, tables 656 and 682, pp. 410 and 426.

[5] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 11-25, p. 128. Data are for persons aged 10 years and older reporting a gainful occupation.

[6] See *Employment and Earnings*, January 2000, table A-3, p. 12.

[7] See Caplow, Hicks, and Wattenberg, 2000, pp. 44-45.

[8] See Census Bureau, *Statistical Abstract of the United States: 2000*, table 669, p. 416.

[9] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, p. 134.

[10] U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 26-35, p. 72.

[11] See *Employment and Earnings*, January 2000, tables A-3 and A-4, pp. 12-13.

[12] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 59-70, p. 9.

[13] See U.S. Council of Economic Advisors, 2000, pp. 279.

[14] See Caplow, Hicks, and Wattenberg, 2000, pp. 160-61.

[15] See *Employer Costs for Employer Compensation, 1986-99*, text table 1, p. 2.

[16] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 905-12, pp. 174-75.

[17] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 765-78, p. 168.

[18] Bureau of Labor Statistics, on the Internet at **http://stats.bls.gov/ceshome.htm** (visited Nov. 28, 2000).

[19] Ibid.

[20] Ibid. (visited Jan. 23, 2001), and *Monthly Labor Review*, November 2000, table 13, p. 66.

[21] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series M 271-86, p. 607.

[22] "National Census of Fatal Occupational Injuries, 1999," USDL 00-236 (Bureau of Labor Statistics, Aug. 17, 2000), table 3, p. 8.

[23] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 2, Series Q 398-409, p. 740.

[24] "National Census of Fatal Occupational Injuries, 1999," USDL 00-236 (Bureau of Labor Statistics, Aug. 17, 2000), table 1, p. 6.

[25] See U.S. Department of Labor, "Two Hundred Years of Work in America," 1976.

[26] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 85-86, p. 135.

[27] See *Monthly Labor Review*, November 2000, table 1, p. 56.

[28] See Goldin, 1994, pp. 34-36.

[29] See *Monthly Labor Review*, November 2000, table 7, p. 61.

[30] Cycles are counted peak to peak. (See Business Cycle Timeline.)

[31] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series D 85-86, p. 135; Caplow, Hicks, and Wattenberg, pp. 44-45; and Bureau of Labor Statistics, on the Internet at **http://stats.bls.gov/ceshome.htm** (visited Nov. 28, 2000).

[32] See U.S. Council of Economic Advisors, p. 279.

[33] See U.S. Council of Economic Advisors, p. 278.

[34] Ibid., pp. 100-01 and 281.

[35] Ibid., table 3-2, p. 113.

[36] "Multifactor Productivity Trends, 1998," USDL 00-267 (Bureau of Labor Statistics, Sept. 21, 2000), table 7, p. 22.

[37] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series B 107-15, p. 55.

[38] See Census Bureau, *Statistical Abstract of the United States: 2000*, table 116, p. 84.

[39] See U.S. Council of Economic Advisors, pp. 278 and 280.

[40] See U.S. Bureau of the Census, *Historical*

*Statistics of the United States, Colonial Times to 1970*, Part 1, Series A 1-5, p. 8; Census Bureau, "Resident Population Estimates of the United States by Age and Sex," on the Internet at **http://www.census.gov/population/estimates/nation/intfile2-1.txt** (visited July 17, 2001); and Census Bureau, "Resident Population of the 50 States, the District of Columbia, and Puerto Rico: Census 2000," on the Internet at **http://www.census.gov/population/estimates/nation/intfile2-1.txt** (visited July 17, 2001).

[41] See U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Part 1, Series C 88-119, p. 105.

[42] Ibid., Part 1, Series C 120-37, p. 110.

[43] See Census Bureau, *Statistical Abstract of the United States: 2000*, table 6, p. 9, and U.S. Immigration and Naturalization Service, *Statistical Yearbook of the Immigration and Naturalization Service, 1998* (Washington, U.S. Government Printing Office, 2000). Data is for fiscal year ending September 30.

[44] See Goldin, p. 53.

[45] See U.S. Council of Economic Advisors, p. 278.

[46] See Census Bureau, *Statistical Abstract of the United States: 2000*, table 249, p. 157.

[47] Ibid., table 1426, p. 877.

[48] Ibid., table 249, p. 157.

[49] See U.S. Department of Labor, *Report on the American Workforce*, 1999, p. 56.

[50] See Goldin, p. 50.

[51] Ibid., pp. 5-6.

[52] Ibid., p. 6.

[53] Ibid., p. 46.

[54] See Goldberg and Moye, 1985, pp. 37-38.

[55] Ibid., pp. 93-94.

[56] Ibid., p. 97.

[57] Ibid., p. 101.

[58] Ibid., p. 107.

[59] Ibid., pp. 128-31.

[60] Ibid., p. 167.

[61] Ibid., p. 165.

[62] Ibid., p. 158.

[63] Ibid., p. 178.

[64] Ibid., p. 179.

[65] Ibid., p. 202.

[66] Ibid., p. 240.

[67] Ibid., p. 241.

[68] Ibid., p. 249.

[69] Ibid., pp. 248-49.

## Business cycle timeline

The chronology of the more or less regular recurrence of periods of economic expan-sion and contraction that make up the U.S. business cycle is maintained by the National Bureau of Economic Research (NBER), a private, nonprofit, nonpartisan research institution. NBER identifies turning points, that is, dates when economic activity turns in the opposite direction. For example, the most recent turning point was March 1991. Sometime during that month, the economy stopped contracting and started expanding. Thus, March 1991 was a business cycle trough. Similarly, July 1990 was a peak. Sometime during that month, the economy stopped expanding and started contracting.

A recession is a period of declining output and employment. A recession begins just after the economy reaches a peak and ends as the economy reaches its trough. Between trough and peak, the economy is in an expansion. Expansion has generally been the normal state of the economy; recessions have been brief and relatively rare in the latter part of the century.

### Business Cycle Turning Points, 1899-1999

| *Peaks* | *Troughs* |
|---|---|
| June 1899 | |
| | December 1900 |
| September 1902 | |
| | August 1904 |
| May 1907 | |
| | June 1908 |
| January 1910 | |
| | January 1912 |
| January 1913 | |
| | December 1914 |
| August 1918 | |
| | March 1919 |
| January 1920 | |
| | July 1921 |
| May 1923 | |
| | July 1924 |
| October 1926 | |
| | November 1927 |
| August 1929 | |
| | March 1933 |
| May 1937 | |
| | June 1938 |
| February 1945 | |
| | October 1945 |
| November 1948 | |
| | October 1949 |
| July 1953 | |
| | May 1954 |
| August 1957 | |
| | April 1958 |
| April 1960 | |
| | February 1961 |
| December 1969 | |
| | November 1970 |
| November 1973 | |
| | March 1975 |
| January 1980 | |
| | July 1980 |
| July 1981 | |
| | November 1982 |
| July 1990 | |
| | March 1991 |

# Chapter 1

# Counting Minorities: A Brief History and a Look at the Future

Since the inception of the Republic, a wide variety of race and ethnic groups has comprised the American population. Some, like the ancestors of today's African Americans, came unwillingly, others fled starvation or religious or political persecution, while still others came simply for the chance to better their lives economically. As the population's diversity has increased, so has the need for data on minority groups. Such data not only help describe this diversity, but also assist in understanding how well—or poorly—various minority groups are faring and give decisionmakers some information on which to base policy proposals.

The purpose of this chapter is to describe the evolution of the collection of data on minorities, focusing on the decennial census and the Current Population Survey (CPS), the Nation's labor force survey. The chapter begins with a brief history of immigration to this country. It then goes on to describe early efforts to collect data on minorities through the decennial census. Next, it describes changes that were made to the CPS to help monitor the status of minorities in the labor force. A section summarizing the current labor force situation of minority workers, including subsections on immigrants, expenditures, and Bureau of Labor Statistics (BLS) projections of minority participation in the labor force, follows. The chapter concludes with a discussion of current efforts to meet demands for better data on minorities, particularly persons of multiracial backgrounds.

## A History of Immigration and Migration

***Colonial era.*** Initially, Britain's North American colonies were peopled by immigrants from the British Isles. These immigrants included not only those who came to the New World for economic gain, but also religious minorities, political dissidents, minor criminals, and indentured servants. Soon, however, the colonial economies began to grow rapidly, increasing their demand for labor. "By the beginning of the eighteenth century government officials had decided that it was in the interest of England to improve and thicken her colonies with people not her own." [1] Two strategies were followed in order to fill the gap. First, the slave trade was developed through royal charters. Second, Protestants from other European countries were actively sought as settlers, with funds often provided for their transportation.

***Independence.*** After the Revolutionary War, immigrants continued to pour into the new country. Although the new nation had been able to end the British practice of transporting political and criminal prisoners, it was unable to put an end to the slave trade, despite the fact that many found it objectionable. Consequently, even though immigrants from Europe flowed to the United States in large numbers, it

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has been estimated that more Africans than Europeans came to the United States each year until 1840, and that cumulative European immigration did not surpass that of Africans until 1880.[2] This may seem shocking, considering that President Thomas Jefferson signed a bill in 1807 that made it illegal to import any person of color into the United States as a slave.[3] However, little effort was made to enforce this law over the next 50 years. Shipbuilders from Baltimore even continued constructing slave ships, and underwriters still insured those ships.[4]

Early on, problems assimilating some of the immigrants began to arise. Among the European immigrants were a sizable number of Germans and Irish who were Roman Catholics. Anti-Catholic sentiment began to emerge and was adopted by such groups as the Native American movement (not to be confused with American Indians) in 1837, followed by the Know-Nothing party around 1850. These were the first major political movements endorsing the limitation of immigration of certain groups,[5] thus marking the beginning of an exclusionary movement that eventually culminated in the highly restrictive National Origins Act of 1924.

***The Great Irish Migration.*** During the 19th and early 20th centuries, Ireland, one of Europe's smallest countries, accounted for more immigrants than any other European nation. Indeed, for most of the second half of the nineteenth century, "the rate of Irish emigration was more than double that of any other European country, with as many as 13 per thousand emigrating on average each year."[6] Altogether, about 4.5 million Irish immigrated to the United States between 1820 and 1930 according to American statistics,[7] and the Irish represented at least a third of the foreign-born population of the country between 1850 and 1870. (See table 1-1.)

The failure of the Irish potato crop in 1845-46 helped provide the impetus for this mass migration. The Irish economy was largely agrarian, dependent upon the export of cattle and grain to England. Thus, most of the product of the Irish farmers was sold, leaving the potato as the staple food of the farmer and his family. Consequently, when the potato crop failed, famine ensued. The effects of this famine were profound; more than 1 million people died from starvation and disease.[8] Millions of Irish fled their homeland and, by 1891, the population of Ireland (4.7 million) was only 57 percent of what it had been 50 years earlier.[9]

***Asian immigration and the origins of exclusionary legislation.*** While the Irish were crossing the Atlantic, Chinese laborers were crossing the Pacific. By the beginning of the Civil War, contract laborers from China had become abundant on the West Coast. However, they were soon perceived as competing with domestic labor; they typically worked long hours for considerably less pay than their domestic counterparts. In addition, their language and culture were very different from that of the predominant European-based culture. For a time, Chinese contract labor was concentrated largely on the west coast. But that changed following the completion of the Nation's first transcontinental railroad in May 1869. The next month, the Nation's first convention to discuss the importation of Chinese labor was held in Memphis, Tennessee, organized and attended by businessmen from nine southern States and California.[10]

A year later, 75 Chinese laborers arrived in North Adams, Massachusetts, to break a strike, working for pay less than half that of the striking workers.[11] Reacting to a perceived threat (Chinese labor was likened to slavery, and Chinese laborers were depicted as stealing food from honest white workers[12]), politicians began to introduce legislation aimed at limiting Chinese immigration or banning it altogether.

In 1879, the U.S. Congress passed the first immigration restriction law aimed at a particular nationality. The Fifteen Passenger Bill limited the number of Chinese passengers on any ship entering the United States to 15. But because it would have violated the 1868 Burlingame-Seward treaty between the United States and China, which recognized the rights of Chinese to emigrate, the bill was vetoed.[13]

In 1880, however, America and China signed a new agreement, called the Angell Treaty, that allowed the United States to limit Chinese immigration. Two years later, President Chester A. Arthur signed the Chinese Exclusion Act. This act barred Chinese immigrant laborers for 10 years. It was renewed in 1892, again in 1902 and, in 1904, was renewed for an indefinite length of time.[14] The passage of this act paved the way for further restrictive legislation affecting not only Asians, but Europeans as well.

***European immigration in the late 19th and early 20th centuries.*** There was a pronounced shift in the country of origin of European immigrants beginning in the late 19th century. Originally, European immigrants tended to come from northwestern Europe. (See table 1-1.) In the late 1800s, this trend gradually began to change and, by the early 1900s, the majority of European immigrants were from southern and eastern Europe. These new immigrants came from areas with cultural and linguistic traditions considerably different from those of the earlier European immigrants. Thus, the United States found itself confronted by problems in assimilating these new immigrants.

President Theodore Roosevelt helped set up a factfinding commission to resolve the problem.[15] In 1911, the Immigration Commission published a report that "lamented the progressive shift in the sources of immigration away from northwestern and toward southern and eastern Europe, perceiving it as a decline in immigrant quality."[16] In 1917, a literacy act was passed (this had been attempted earlier, without success) to restrict European immigration and, in 1921, the United States passed the Emergency Quota Act, which applied immigration quotas based on nationality or origin. The provisions of this act were renewed and made more restrictive by the National Origins Act of 1924. The quota system was reaffirmed in the Immigration and Nationality Act of 1952. With few exceptions, these quotas remained relatively intact until President Johnson signed the Immigration and Nationality Act of 1965, which finally did away with the system of national origin, race, or ancestry quotas for immigration to the United States.[17] More recently, the Immigration Reform and Control Act of 1986 permitted some undocumented aliens to obtain lawful permanent residence, and the Immigration Act of 1990 increased the annual cap on immigration.[18]

The impact of these legislative changes can be seen in the statistics. In 1960, about 5 percent of the foreign-born population were Asian and 9 percent were from Latin America, while almost 75 percent were from Europe. By 2000, a little more than 25 percent of the foreign-born population came from Asia and 51 percent came from Latin America, compared with 15 percent from Europe. (See table 1-1.)

***Blacks leave the South.*** Not all migrations have come from abroad. There have also been large shifts in population within our borders. One that has had far-reaching effects on the Nation was the mass movement of blacks out of the rural South. Between 1910 and 1920, the black population of the North rose by almost 700,000, and by 1930 nearly 1 million blacks had left the South.[19] Some areas in South Chicago went from being predominantly white to predominantly black in a very short period.[20] Poverty, racial segregation, and Jim Crow laws in the South, coupled with a boom in war industries and a decline in immigrant labor from abroad, combined to bring about this population shift.

Not only did blacks move out of the South, they also moved to urban centers. In 1940, for instance, 48 percent of the black population was classified as urban. By 1960, this number had risen to 80 percent.[21] Data from the Current Population Survey indicate that 86 percent of blacks lived in metropolitan areas in 1999, with 55 percent in central cities.[22] This shift of the black population from the relative isolation of the rural South to urban centers in the North and elsewhere turned national attention to problems and tensions that had previously existed mainly in the South.

## Counting Minorities

***The decennial census.*** The counting of minorities began virtually at the inception of the Republic. A constitutional requirement established the United States as the first country to provide for "a regular periodic enumeration of its inhabitants."[23] In order to determine each State's share of direct taxes and congressional representation, a nationwide census of the population on a regular basis was established by the United States Constitution:

> Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons. The actual Enumeration shall be made within three Years after

> the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. (Article 1, Section 2)[24]

Since 1790, when the first decennial census was undertaken, there have been numerous approaches to counting various racial and ethnic groups. (See box on p. 19.) Many of the changes in the census questions coincide roughly with immigration milestones. For instance, in 1850, after the substantial Irish immigration got under way, a question was asked about the country of birth. The census of 1870 specifically counted Chinese just as concerns over Chinese contract labor were arising.

In 1910, a question was added about the native language of individuals ("mother tongue," in the terminology of the day). This was an attempt to identify more clearly the ethnic groups coming to the United States from eastern and southern Europe. Many of these immigrants were coming from the great multiethnic empires of Austria-Hungary, Russia, and Germany, and it was felt that the question on country of origin was simply inadequate, if not altogether misleading, as a means of classifying these new émigrés by origin.[25] Beginning in 1960, Hispanics were identified by the census, and in each following decade, the number and variety of groups that were counted increased.

In most censuses, the enumerators determined the race of respondents. Beginning with the 1970 census, however, the respondents themselves identified their race and ethnicity category. (The 1970 census was also the first to be conducted primarily by mail; prior censuses had relied on personal visits by enumerators.)

At various times, the census has attempted to identify people of what is now termed multiracial ancestry. For instance, in 1850 a category designated "mulatto" was included. In 1870, this was expanded to include the categories of "quadroon" and "octoroon." In 1930, however, the interviewer's instructions did not provide for any mixed-race categories. Instead, people were categorized into a limited number of race and ethnic classifications. Essentially, the rule was that any combination of white and any other racial ancestry was reported as the race of the parent who was not white.[26] Seventy years later, in 2000, the census once again gave respondents the opportunity to be identified as having multiracial ancestry by allowing them to check more than one race category.

In the mid-19th century, questions were added to several censuses to measure a nonrace and nonethnic minority—persons with certain kinds of disabilities. These were the blind, the deaf, the mute, the mentally ill, and the retarded. No further attempt was made to identify persons with disabilities until 1970, when a question was added regarding work disabilities. This question was further refined over the decades until, in 2000, the census attempted to identify persons with physical or mental conditions, or both, that impacted their lives.

***The Current Population Survey.*** The Current Population Survey (CPS) is an ongoing monthly sample survey, conducted for the Bureau of Labor Statistics (BLS) by the U.S. Census Bureau, that collects information on the employment status of persons. BLS uses this information to produce monthly estimates of employment and unemployment.[27] The survey is also the primary intercensal source for demographic and other socio-economic information on the population. Over time, it has become an important source of data on many of the Nation's minority groups.

The origins of the CPS date back to the late 1930s, when initial efforts were made to measure unemployment. Much of the developmental work during this period was done by the Works Progress Administration (WPA). By the early 1940s, the effort had been shifted to the Census Bureau. During the war years, the Census Bureau redesigned the sample and, in 1945, revised the questionnaire.[28]

These early questionnaires collected demographic data on household members similar to that which is collected today. For instance, a CPS questionnaire from June 1946 asked about the respondent's sex, age at last birthday, and "color." Under "color," three entries were allowed: White, Negro, and other. In 1952, this category was renamed "race," although the same information was still collected.

In April 1973, a category labeled "ethnicity" was added, and the interviewer was instructed to indicate a numeric code that corresponded to the ethnic origin that the respondent identified from a flashcard. While "race" was a term used to indicate a division of the population into groups distinguished by physical characteristics, "ethnicity" was a concept

**Selected information on personal characteristics collected by decennial census by year**

| Year | Information collected (using terminology of the time) |
|---|---|
| 1790 | Free whites; and slaves |
| 1800 | Free whites (except Indians not taxed); and slaves |
| 1810 | Free whites (except Indians not taxed); and slaves |
| 1820 | Free whites (except Indians not taxed); foreigners not naturalized; free colored persons; and slaves |
| 1830 | Free whites; slaves; and free colored |
| 1840 | Free whites; slaves; free colored; deaf, dumb, and insane whites; and deaf, dumb, and insane colored |
| 1850 | White; black; mulatto; country of birth; deaf, dumb, and insane whites; and deaf, dumb, and insane coloreds |
| 1860 | White; black; mulatto; country of birth; number of slaves; deaf, dumb, and insane whites; and deaf, dumb, and insane coloreds |
| 1870 | White; black; mulatto; quadroon; octoroon;[1] Chinese; Indian; country of birth; foreign-born parentage; and deaf, dumb, and insane |
| 1880 | White; black; mulatto; quadroon; octoroon; Chinese; Indian; country of birth; and country of birth of parents |
| 1890 | White; black; mulatto; quadroon; octoroon; Chinese; Japanese; Indian; country of birth; and country of birth of parents |
| 1900 | White; black; mulatto; Chinese; Japanese; Indian; country of birth; country of birth of parents; and year of immigration |
| 1910 | White; black; mulatto; Chinese; Japanese; Indian; other; country of birth; country of birth of parents; native language; and English fluency |
| 1920 | White; black; mulatto; Chinese; Japanese; Indian; other; country of birth; country of birth of parents; native language; native language of parents; and English fluency |
| 1930 | White; black; Chinese; Japanese; Indian; Mexican; country of birth; country of birth of parents; native language; and English fluency[2] |
| 1940 | White; black; mulatto; Chinese; Japanese; Indian; Filipino; Hindu; Korean; country of birth; citizenship of the foreign-born; and country of birth of parents |

[1] According to the 1870 census instructions, “the word ‘black’ should be used to describe those persons who have three-fourths or more black blood (sic); ‘mulatto,’ those persons who have from three-eighths to five-eighths black blood (sic); ‘quadroon,’ those persons who have one-fourth black blood (sic); and ‘octoroon,’ those persons who have one-eighth or any trace of black blood (sic).”

[2] The 1930 census had specific instructions for reporting race. “A person of mixed white and Negro blood was to be returned as Negro, no matter how small the percentage of Negro blood; someone part Indian and part Negro also was to be listed as Negro unless the Indian blood predominated and the person was generally accepted as an Indian in the community. A person of mixed white and Indian blood was to be returned as an Indian, except where the Indian blood is very small or where he or she was regarded as white in the community.”

| Selected information on personal characteristics collected by decennial census by year | |
|---|---|
| **Year** | **Information collected (using terminology of the time)** |
| 1950 | White; Negro; American Indian; Japanese; Chinese; Filipino; Hawaiian; part Hawaiian; Aleut, Eskimo, and so forth; country of birth; and country of birth of parents |
| 1960 | White; Negro or Black; Indian (American); Japanese; Chinese; Filipino; Hawaiian; Korean; other; country of birth; parents' place of birth; and Hispanic origin |
| 1970 | White; Asian Indian; Black or Negro; Hawaiian; Japanese; Guamanian; Chinese; Samoan; Filipino; Eskimo; Korean; Aleut; Vietnamese; Indian (American); other; Spanish/Hispanic origin or descent (Mexican, Puerto Rican, Cuban, Central or South American, other Spanish, none of these); country of birth; language spoken at home; ancestry; and work disability. |
| 1980 | White; Black or Negro; Indian (American); Eskimo; Aleut; Chinese; Japanese; Filipino; Asian Indian; Hawaiian; Samoan; Korean; Guamanian; Vietnamese; other race; Spanish/Hispanic origin (Mexican, Puerto Rican, Cuban, Central or South American, other Spanish, none of these); country of birth; ancestry or ethnic origin; language spoken at home; English fluency; and disability. |
| 1990 | White; Black or Negro; Indian (American); Eskimo; Aleut; Chinese; Japanese; Filipino; Asian Indian; Hawaiian; Samoan; Korean; Guamanian; Vietnamese; other Asian and Pacific Islander; other race; Spanish/Hispanic origin; country of birth; ancestry or ethnic origin; language spoken at home; English fluency; and disability. |
| 2000 | White; Black or Negro; Indian (American); Eskimo; Aleut; Chinese; Japanese; Filipino; Asian Indian; Hawaiian; Samoan; Korean; Guamanian; Vietnamese; other Asian and Pacific Islander; other race; multiracial; Spanish/Hispanic origin; country of birth; ancestry or ethnic origin; language spoken at home; English fluency; and disability. |

that divided the population into groups according to shared cultural, linguistic, or national origin characteristics. Thus, "ethnicity" was a concept that could cut across racial groups. In September 1974, the label was changed from "ethnicity" to "origin." The primary purpose of this question was to identify persons of Hispanic origin.

In January 1979, in response to OMB Directive 15,[29] the race category "other" was disaggregated into three groups: American Indians, Asians, and Pacific Islanders.

Determining an individual's race has always been somewhat problematic. According to the American Anthropological Association, "The concept of race is a social and cultural construction, with no basis in human biology—race can simply not be tested or proven scientifically."[30]

Until the late 1970s (as was the case with the decennial census until 1970), the interviewer determined race. Following are the instructions concerning the determination and coding of race issued in 1961:[31]

> The codes used for race: "W" for white, "Neg." for Negro, and "OT" for Other. Record Mexicans, Puerto Ricans, and other persons of Latin-American descent as white, unless they are definitely of Negro or other nonwhite race.
>
> Enter "Neg." for Negroes and for persons of mixed white and Negro parentage. A person of mixed American Indian, and Negro blood should be entered as "Negro," unless you [the interviewer] know that the Indian blood

> very definitely predominated and that he is regarded in the community as an Indian. Enter "OT" for races other than white or Negro, such as Japanese, Chinese, American Indian, Korean, Hindu, Eskimo, etc.
>
> For persons of mixed parentage:
> 1) Mixture of white and nonwhite races, report race of nonwhite parent
> 2) Mixture of nonwhite races, report according to the race of the father.
>
> You can usually determine race by observation, but should inquire in the case of servants, hired hands, or other persons unrelated to the household head.

While these instructions provided a systematic way of categorizing individuals by race, the classifications were rather arbitrary and dependent on the enumerator's preconceptions. And in the case of mixed parentage, that is, white and nonwhite or any combination of nonwhites, the classification directions were inconsistent.

Beginning in October 1978, the interviewer was no longer permitted to determine the race of household members by observation. Instead, the interviewer was required to ask the household respondent the race of each household member, presenting the respondent with a flashcard that listed racial categories. The purpose of this change was to provide more accurate estimates of characteristics by race. According to interviewer instructions:[32]

> It is important that you ask the question in all cases even though the respondent's race may seem obvious. Studies have indicated that there is a significant difference in the recording of racial categories between the procedures of asking race as opposed to marking it by observation. What may seem obvious to the observer is in some cases not what the respondent considers himself/herself. Misrecorded cases potentially have a serious impact on the quality of the final CPS data. Also, some households are comprised of persons of different races. The assumption that all household or family members are of the same race as the respondent is not valid.

Like the determination of race, the determination of "origin" was left up to the respondent. He or she was shown a flashcard and asked to pick the appropriate origin or descent. The origin question was asked *in addition* to the race question. According to the interviewer's manual:[33]

> Origin or descent refers to the *national* or *cultural* group from which a person is descended and is determined by the nationality or lineage of a person's ancestors. There is no set rule as to how many generations are to be taken into account in determining origin. A respondent may report origin based on the origin of a parent, grandparent, or some far-removed ancestor.

During the last CPS revision, which began in 1986 and terminated when the current, redesigned survey system and questionnaire were placed in service in 1994, questions having to do with the demographic characteristics of household members were reviewed and revised where appropriate. The questions on race and origin, however, remained virtually unchanged.[34]

## Publication of Information on Minority Workers

***Late 19th and early 20th century.*** During this period, data collection methods were crude and limited in scope by today's standards. As a result, studies frequently looked at conditions in limited geographic areas, and the data used were often of an anecdotal nature.

In May 1897, the Department of Labor (the name at the time of the Federal agency that would eventually evolve into today's Bureau of Labor Statistics) published a bulletin entitled "Conditions of the Negro in Various Cities," by George G. Bradford. The study focused on the very high mortality rates of blacks, as well as the characteristics of black families.

In 1898, the Department of Labor published W. E. B. Du Bois' first study on African Americans, "The Negroes of Farm-ville, Virginia." In 1899, the Department published another of Du Bois' works, "The Negro in the Black Belt," which was based on his students' experiences. (Du Bois was a professor of sociology at the University of Atlanta.)

In 1901, three more black studies, two by William Taylor Thom, and the third by Du Bois, were published, and another two were issued the next year (1902). For the next decade and a half, little was published in the way of minority studies, as what was to become the Bureau of Labor Statistics underwent several reorganizations. Finally, in 1918 (by which time the Bureau of Labor Statistics had become part of a new Department of Labor), publication of studies on blacks resumed. (See box below.)

In the February 1918 edition of the Bureau's *Monthly Review*, a study by Abraham Epstein, entitled "The Negro Migrant in Pittsburgh," appeared. The migration of blacks from the South had begun to put a strain on the communities in the North. This study focused on the increase of blacks within the city of Pittsburgh, with the goal of producing information that would prove useful to other northern cities experiencing significant increases in black population.

In 1920, the *Monthly Labor Review* (the name of the *Monthly Review* was changed to *Monthly Labor Review* in July 1918) published an article examining the effect of black labor in the stove industry. The article argued in favor of the "cordial acceptance" of the black worker within this industry, while describing the black laborer's difficulties. The article further described black people as a part of American society, as legitimate as any other citizens of the country and having the same common needs. (It would appear that the editorial policy for the *Monthly Labor Review* in the early part of the 20th century gave authors a great deal more latitude in expressing opinions or making recommendations regarding social policy than does today's politically- and policy-neutral *Review*.)

Blacks were not the only minority group for which information was presented in the *Monthly Labor Review*. A regular feature in the early years of the *Review* was the publication of national immigration figures. These figures were normally published every 2 months, and this continued until 1920. Interestingly, in June of 1918, there was a focus on Japanese migration for the previous year. A 1920 article looked at the situation in several western States that had seen an increase in the number of Mexican laborers. The Department of Labor had issued orders temporarily admitting Mexicans to alleviate labor shortages within agriculture. As a result, there was a widespread belief among domestic agricultural laborers that they were losing jobs to low-wage Mexican labor. The study found that "in the 25 towns and cities visited...the number of Mexicans displacing white men was negligible" and that "a dire and imperative need was met in making the exceptions and permitting Mexican labor to enter this country on easy terms to meet the abnormal demand for common labor."[35] Because immigration from Europe and elsewhere had practically ceased, the Mexican workers were found to provide an effective alternative to that lost labor source.

***The Current Population Survey era.*** As noted above, the CPS is an extremely rich source of

### Division of Negro Economics

World War I had brought a great many blacks to the cities, particularly in the North, to fill labor needs. In 1921, a *Monthly Labor Review* article examined a division of the Department of Labor that devoted itself to the results of this migration, and the situations it created. The Division of Negro Economics was responsible for looking into the problems that resulted when large groups of black workers sought jobs in northern defense plants.[1] The Division's director was Dr. George E. Haynes and, under his direction, 11 State committees and about 225 local county and city committees, with a membership numbering more than 1,000, were appointed. The work of these committees was to promote a national campaign "to create good feeling between the races, and to have both white and Negro citizens understand and cooperate with the purpose and plans of the department."[2] The division published an indepth report on the industrial experiences of blacks during and after World War I that included an investigation into race troubles in Chicago. This division contributed to normalizing race relations during the early 20th century. It was the first of its kind to attempt such work, and was the forerunner of later Federal programs to promote black equality.

[1] See U.S. Department of Labor, 2000.

[2] See "Industrial Relations," 1921, p.140.

demographic information for a wide variety of topics, including the labor force. It is not feasible, therefore, to present an exhaustive account of all published data from the CPS dealing with minorities here. This section will attempt merely to highlight some milestones in the publication of labor force data for minorities.

Labor force data by race from the CPS were first published in 1950 (the data were for 1949).[36] The estimates, which reported the "color" of workers, were expressed in percentages, not numbers, because the population controls needed to produce estimates of levels by race had not yet been developed. In January 1953, population controls based on the 1950 decennial census were introduced into the CPS estimation process and, later in the year (September), the process was further improved so that estimates by race could be produced. In 1955, employment levels for whites and nonwhites were first published.[37] (It should be noted that such data are available back to 1954.[38])

At first, data on race were published only for whites and a catchall group called nonwhites. For years, the nonwhite group was used to represent blacks because the overwhelming majority of nonwhites in the United States were blacks (92 percent in 1960 and 89 percent in 1970.) By 1980, however, blacks as a proportion of the total nonwhite group had shrunk to 84 percent. Thus, the nonwhite category had only limited value in analyzing changes in labor force activity either among blacks or among the other race groups, including Asians, Pacific Islanders, and American Indians. These other groups tended to have significantly different labor force characteristics than did blacks. Thus, in 1983 BLS began to publish data for blacks only. Black-only data also were computed for many series going back to 1972. For historical continuity, however, the Bureau continued to publish some basic series for the group now called "black and other."[39]

Interestingly, while the official change to the publication of black-only data came in 1983, there are examples of data for blacks being published almost a decade earlier. In the April 1974 issue of the BLS publication *Employment and Earnings*, Negro-only data were referred to for the first time in the "Concepts" section of the Technical Note.[40] The same publication contained a table with quarterly data for blacks only and for Hispanics.[41] However, data for the combined "black and other" group continued to appear in the Department of Labor's monthly *Employment Situation* press release until the issuance of January 1982 data. That was when 1980 census population controls were incorporated into the CPS estimation procedures and data for blacks only and for Hispanics first appeared as a regular part of the monthly press release.[42] Monthly data for blacks only did not appear in *Employment and Earnings* for another year, until the January 1983 estimates were published.[43] Monthly data for the "black and other" group also continued to be published in *Employment and Earnings* for about another decade.

## Current Data on Minority Workers

Over time, the scope and variety of data published by BLS for black and Hispanic workers have increased enormously. This section presents an overview of these data and some of the major findings. It is intended to illustrate the range of information available, rather than being a comprehensive analysis of the status of minorities.

***Labor force participation rates.*** In 2000, there was little difference among labor force participation rates for blacks (65.8 percent), Hispanics (68.6), and whites (67.4 percent). However, there were sizable differences among these groups when the rates by gender were compared. (See table 1-2.)

Labor force participation rates for black men (69.0 percent) continued to be lower than those for Hispanic or white men (80.6 percent and 75.4 percent, respectively). This same pattern of differences (Hispanic and white men as more likely than black men to be in the labor force) was true for every age group as well. Among women, labor force participation rates were higher for black women (63.2 percent) than for their Hispanic (56.9 percent) or white (59.8 percent) counterparts. For each age category except teenagers, Hispanic women's participation rates were lower than those of the other two groups.

The overall participation rate for blacks has grown from 60.2 percent in 1973 to nearly 66 percent in recent years.[44] (See table 1-3.) This growth has been solely due to the increased participation of black women in the labor force: for black women, participation rates rose by nearly 14 percentage points, to 63.2 percent, from 1973 to 2000, while rates for black men fell by 4.4 percentage points. The pattern of change was similar among whites but, among Hispanics, men's participation rates did not decline as much as those of black or white men.

***Unemployment.*** From 1992 to 2000, jobless rates have declined dramatically for the major race and ethnic groups, with the decline for blacks being greater than those for the other two groups. For blacks, the rate dropped 6.6 percentage points, while that for Hispanics fell by 5.9 points, and that for whites declined by 3.1 points. (See table 1-4.) The decrease in unemployment among blacks may partly reflect gains for both men and women in the proportions with schooling beyond high school:

*Percent of the labor force 25 years and older with more than a high school diploma*

| | *1992* | *2000* |
|---|---|---|
| Black: | | |
| Men | 39.9 | 49.2 |
| Women | 44.6 | 54.2 |
| Hispanic: | | |
| Men | 29.4 | 30.9 |
| Women | 34.7 | 38.0 |
| White: | | |
| Men | 52.7 | 57.8 |
| Women | 52.6 | 60.0 |

Yet, despite the impbrovements in the unemployment rates for blacks and Hispanics, blacks continue to be a little more than twice as likely as whites to be unemployed, while Hispanics are not quite 2 times as likely as whites to be unemployed.

***Education and occupation.*** Education is an important predictor of labor market outcomes. The more educated the worker, the more likely he or she is to be in the labor force, and the less likely to be unemployed. Moreover, when those with more education are employed, they are much more likely to work in a high-paying managerial or professional occupation.

Although whites continue to have more education than do either blacks or Hispanics, black women and men have made remarkable educational progress in recent years. As the text table above shows, close to 40 percent of black men and 45 percent of black women in the labor force had at least some education beyond the high school level in 1992. By 2000, these proportions had grown to about 49 percent and 54 percent, respectively.

Because education level is an important factor in the occupational self-selection of workers, it is not surprising that the occupational distributions of blacks, Hispanics, and whites vary greatly. For instance, table 1-5 shows that white men are far more likely to be managers or professionals (29.2 percent) than are black or Hispanic men (18.5 percent and 11.4 percent, respectively). Among women, 24.8 percent of blacks and 17.8 percent of Hispanics are managers or professionals, compared with 33.4 percent of whites.

***Earnings.*** Education and occupation, of course, impact earnings. Among full-time wage and salary workers, the median weekly earnings of blacks ($468) and Hispanics ($396) were much lower than those of whites ($591). For both blacks and Hispanics, the earnings gap is more pronounced among men than among women—the median for black men was 75.2 percent of that of white men and that of Hispanic men was 61.9 percent of that of their white counterparts. Among women, blacks earned 85.8 percent of what white women earned, while Hispanics earned 72.8 percent. (See table 1-6.)

Since 1986, the earnings gap between black and white men has actually closed slightly. However, the gap between the earnings of the other minority groups (black women and Hispanics) and those of their white counterparts has grown.

Among workers paid hourly rates, there was very little difference among whites, blacks, and Hispanics in the proportions who worked for a wage at or below the prevailing Federal minimum wage ($5.15 per hour) in 2000. Only about 3.2 percent of Hispanic hourly paid workers earned the minimum or less, as did 3.6 percent of blacks and 3.8 percent of whites.

***Labor force projections, 1998-2008.***[45] With the exception of profound social and cultural changes such as those that led to the surge of women into the labor force in the 1970s and early 1980s, population growth is the main engine behind labor force growth. The civilian noninstitutional population will continue to increase over the 1998-2008 period, at roughly the same rate as during the previous 10 years. Numbers of Asians (and others) and Hispanics are projected to continue to grow much faster than those of whites or blacks. One of the major factors underlying the growth in the Hispanic and Asian populations in recent years has been the massive migration to the United

States that started in the 1970s and continues today. And, while immigration is expected to decrease slightly between 1998 and 2008, projected net immigration will remain a sizable proportion of population growth over the 1998-2008 projection period.

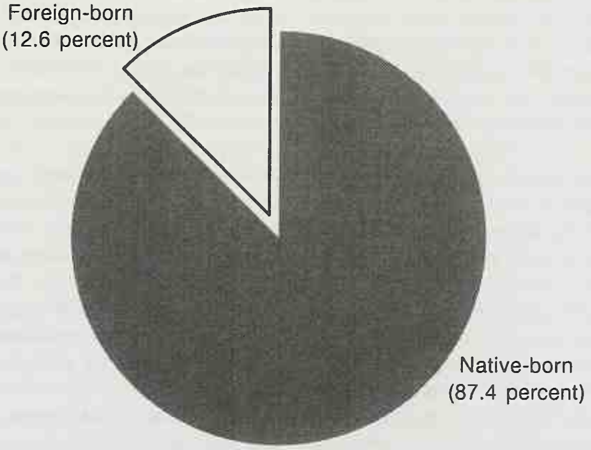
All of the race and ethnic groups in the labor force are projected to continue to grow between 1998 and 2008, but somewhat more slowly than over the preceding 10 years. Of the four race and ethnic groups shown in table 1-7, the "Asian and other" labor force is projected to increase the most rapidly, followed by Hispanics, and then blacks. As a result, by 2008 the Hispanic labor force is projected to overtake the black labor force in size. (The Asian labor force is less than half the size of either the black or the Hispanic labor force.) For all three groups, much of the change in labor force size is due to population growth, which, for Hispanics and Asians, will result from continued immigration.

Despite gains in the numbers in the labor force, relatively little change is anticipated in labor force participation rates overall during the 1998-2008 period (barring, of course, major secular or cyclical changes, or both.) Indeed, as table 1-8 shows, the labor force participation rates for Hispanics and Asians are projected to remain virtually unchanged between 1998 and 2008. In contrast, the participation rate for blacks is expected to grow by 0.7 percentage point, and that for whites, by 0.6 percentage point.

***Immigrants.*** Foreign-born[46] workers make up nearly 13 percent of the U.S. workforce. (See chart 1-1.) The labor force participation rates of the foreign-born, overall, are generally lower than those of their native-born counterparts, largely because foreign-born women are less likely to be in the labor force than are native-born women. (See table 1-9.)

The labor force participation rates of the foreign-born also vary by race and ethnicity. Among non-Hispanic whites, the foreign-born generally have lower participation rates than did natives, while, among non-Hispanic blacks and Hispanics, the foreign-born are more likely to be in the labor force than are their native counterparts. The participation rates of non-Hispanic foreign-born Asians are about the same as those of their native-born counterparts.

Chart 1-1. **Native-born and foreign-born shares of U.S. labor force, 2000 annual averages**



## The Consumer Expenditure Survey

The data shown in this section are derived from the results of the Consumer Expenditure (CE) Surveys of 1994 (Hispanic comparison only) and 1999. The data collected are the most detailed source of consumer expenditures by demographic characteristic (age, income, and so forth) compiled by the Federal Government. The survey consists of two components: A quarterly Interview and a biweekly Diary. Participants in the Interview survey are asked to recall expenditures on a variety of items for the 3 months prior to the interview. Participants in the Diary survey are given a diary in which to fill out all their expenditures for a specified week. This diary is retrieved and replaced by a fresh one for the second consecutive (and final) week of participation. The samples for each survey are independently selected, so that no family is chosen to participate in both surveys.

Characteristics of the consumer unit are based on those reported for the reference person.[1] These include race and ethnicity. For race, the reference person may be reported to be white; black; American Indian, Aleut, or Eskimo; Asian or Pacific Islander; or of an other race. As for ethnicity, the reference person may be described as a member of one of several European ethnicities (English, Irish, French, German, and so on); as African-American; as one of several Hispanic ethnicities; or as a member of an "other" ethnic group. Hispanic ethnicities for which data are collected are: Mexican; Mexican-American; Chicano; Puerto Rican; Cuban; Central or South American; and other Spanish.

[1] The reference person is the first member mentioned by the respondent when asked to "start with the name of the person or one of the persons who owns or rents the home." It is with respect to this person that the relationship of other consumer unit members is determined.

Foreign-born workers are about as likely to be unemployed as are the native-born. (See table 1-10.) Among the major race and ethnic groups, the unemployment rate among foreign-born non-Hispanic whites is about the same as that of their native-born counterparts. The jobless rates among foreign-born Asians (non-Hispanic), blacks (non-Hispanic), and Hispanics are lower than, or about the same as, the rates for their native-born counterparts.

Given the poorer educational backgrounds of many immigrants, it is not surprising that foreign-born workers were more likely than the native-born to be in occupations typified by low earnings. (See table 1-11.) In 2000, about 19 percent of the foreign-born were employed in service occupations, and the same proportion worked as operators, fabricators, and laborers. The proportion of native-born workers employed in each of these two categories was 13 percent. In contrast, the foreign-born were substantially less likely to be employed in high-paying occupations, such as managerial and professional specialty occupations, than were the native-born (23 percent versus 31 percent, respectively). Not surprisingly, therefore, the median weekly earnings of foreign-born full-time wage and salary workers were $447, or 76 percent of the $591 that native-born workers earned weekly in 2000. The median earnings of foreign-born women were about 81 percent those of their native-born counterparts, while the median for foreign-born men was 71 percent of that of their native-born counterparts. (See table 1-12.)

***How minorities spend their money.*** Expenditure amounts are dependent on income and, to a degree, on household size (Hispanic consumer units have, on average, more members than do black ones). Consequently, differences in expenditure patterns across demographic groups may be clearer if the expenditures are expressed in percentages of the total, rather than dollar amounts. (See box above for a description of the expenditure data source, the Consumer Expenditure Survey.)

***Comparisons by race and Hispanic origin.*** There are some similarities between black and nonblack consumer units. For example, each has about the same family size, on average.

(Black consumer units have more children, but fewer persons over age 65.) They also have comparable numbers of earners. However, there are many differences. For example, reported income before taxes[47] is much lower for black families ($30,427) than for nonblack families ($45,688). Also, fewer than one-half of black consumer units reside in an "owned dwelling," compared with more than two-thirds of nonblack ones. Blacks are about 3 years younger, on average, than are nonblacks; have fewer vehicles, on average; and are less likely to have attended college. Given these differences, it is not surprising to see differences in expenditure patterns for these groups. (See tables 1-13 and 1-14.)

Blacks allocate a larger share of total expenditures (10 percent) to food at home than do nonblacks (8 percent). It is likely that this difference reflects the fact that food needs for black and nonblack consumer units are similar, but that the income for blacks is lower, on average. However, each group spends about the same share (between 5 and 6 percent) on food away from home.

Data for housing are more challenging to analyze. As noted, black consumer units are much more likely to be renters than are nonblack consumer units. Also, many renters have utilities included in their rents. Therefore, com-paring actual expenditure levels for shelter components is not appropriate. To adjust for this, expenditures for owned dwellings; rented dwellings; and utilities, fuels, and public services can be summed together into "basic housing." When the summed expenditures are examined, it is found that black consumers allocate a larger share to housing (29 percent) than do nonblack consumers (25 percent).

Blacks also spend larger shares on apparel and services. However, shares for transportation are nearly identical for consumers of all races (19 percent). Black consumers allocate smaller shares for healthcare and entertainment.

Another measure of the status of different groups in the economy is their overall purchasing power—that is, the percentage of total expenditures in the entire economy accounted for by each of the different groups. These percentages are called "aggregate expenditure shares."

As seen in table 1-14, blacks accounted for 12 percent of all consumer units in 1999, but for only 9 percent of total annual expenditures. This difference, of course, is due largely to the fact that black income is lower, on average, than nonblack income. Thus, the gap between the proportion of the population and the proportion of total consumption becomes another means of measuring the relative well-being of the different groups. It is particularly interesting to note that this measure can indicate relative well-being in certain specific areas of consumption. For instance, black consumers account for 10 percent of total food-at-home expenditures and 7 percent of homeowner expenses. In contrast, they account for 16 percent of renter expenses, largely due to their disproportionate status as renters. Overall though, they account for less than 10 percent of total shelter spending.[48]

Like blacks compared with nonblacks, Hispanics report less income, on average, than do non-Hispanics. (See table 1-15.) Hispanic consumer units allocate a larger share of total expenditures to food at home (11 percent) than do other units (8 percent), but this could be a function of family size as well as income. They allocate a slightly higher share to shelter and utilities (27 percent) than do non-Hispanics (25 percent), and the same is true for apparel and services (6.3 percent compared with 4.6 percent) and transportation (21 percent compared with 19 percent). However, they allocate smaller shares to healthcare and entertainment.

Aggregate expenditure shares are important for Hispanics for two reasons. First, they show how Hispanics fare compared with non-Hispanics currently (1999). (See table 1-16.) In 1999, Hispanics accounted for 8.4 percent of all consumer units. However, they accounted for only 7.5 percent of all consumer expenditures. They accounted for 10 percent of all food-at-home expenditures, and 8 percent of shelter expenditures. Like blacks, they account for a smaller share (6 percent) of owned dwelling expenditures and a much larger share of spending for rented dwellings (14 percent). They account for 10 percent of expenditures for apparel and services, perhaps because of their larger family sizes and larger number of children, but for only 4.8 percent of expenditures for healthcare and 5.5 percent of those for entertainment.

Second, Hispanics have been a growing segment of the population, and their share of total expenditures has grown too. (See table 1-17.) Accounting for fewer than 8 million consumer units in 1994, they numbered more than 9 million consumer units in 1999, an increase of about 18 percent. In the same period, their share of aggregate expenditures rose from 6.3 percent to 7.5 percent.

## Counting Minorities: New Directions

Early results of Census 2000 clearly show that the U.S. population is very diverse racially and ethnically. (See box on p. 29.) Additionally, legislation such as the Americans with Disabilities Act (ADA) has brought other kinds of minority groups to public attention. Consequently, the Federal Government is endeavoring to improve its ability to collect data that will reflect the diversity of the population more accurately.

In 1977, the U.S. Office of Management and Budget (OMB) issued standards for the reporting of statistical information on race and ethnicity by Federal agencies. Commonly referred to as "Directive No. 15," these standards provided the first consistent method for reporting race and ethnicity in the Federal Government. The standards required the collection of Hispanic data separately from race and, at a minimum, the collection of data on four racial categories—White; Black; American Indian, Eskimo, or Aleut; and Asian or Pacific Islander.

Beginning in the late 1980s, the standards came under criticism from those who believed that the minimum categories set forth in Directive No. 15 did not reflect the increasing diversity of our Nation's population that has resulted primarily from growth in immigration and in interracial marriages. In response to these criticisms, OMB announced in July 1993 that it would undertake a comprehensive review of the categories for data on race and ethnicity.

This review, conducted over a 4-year period, was done in collaboration with the Interagency Committee for the Review of the Racial and Ethnic Standards, which OMB established in March 1994 to facilitate the participation of Federal agencies in the review. The Committee, through its Research Working Group, carried out a research program to evaluate various proposals for revising the standards. This extensive research effort, including three national tests, examined alternative approaches for questions to collect data on race and ethnicity. The Committee recommended changes in the standards based on the research results, as well as on the consideration of related public comments and testimony.

OMB adopted many of the changes to the standards recommended by the Committee in its new standards released on October 30, 1997, including the following:

1. A two-question format for the collection of data on race and ethnicity should be used in all cases involving self-identification, and the ethnicity question should precede the race question.
2. Individuals should be allowed to select more than one of the racial categories to identify their racial background.
3. The terms Eskimo and Aleut should be replaced by the term "Alaska Native."
4. Central and South American Indians should now be classified as American Indians.
5. The name of the "Black" category should be changed to "Black or African American."

In addition, OMB decided that the "Asian or Pacific Islander" category should be split into two categories—"Asian" and "Native Hawaiian or Other Pacific Islander." OMB also changed the term used to refer to Hispanics from "Hispanic" to "Hispanic or Latino."

In order to comply with the new standards in the Current Population Survey (CPS), BLS and the Census Bureau conducted research to determine the race and ethnicity questions that meet the requirements of the standards and provide the most reliable and valid data. This research included a supplement to the CPS administered in July 2000. The race and ethnicity questions selected for use in the supplement were the following:

A. Are you Hispanic, Latino, or Spanish?
(1) Yes
(2) No

If the respondent answered yes, then the interviewer asks for the name of the country of origin.

B. Please select one or more of the following categories to describe your race.
(1) White
(2) Black, African American, or Negro
(3) American Indian or Alaska Native
(4) Asian
(5) Native Hawaiian or Other Pacific Islander

## Census 2000

The 2000 Decennial Census contained questions on race and ethnicity similar to the ones being proposed for inclusion in the CPS. Respondents were thus able to report according to the revised race and ethnic guidelines from OMB. The results were released in early 2001. The population's race and ethnic profile at the time of the census (April 2000) is shown below:

| | Percent |
|---|---|
| Total | 100.0 |
| One race | 97.6 |
| White | 75.1 |
| Black | 12.3 |
| American Indian or Alaskan Native | .9 |
| Asian | 3.6 |
| Native Hawaiian or Pacific Islander | .1 |
| Other | 5.5 |
| Two or more races | 2.4 |
| Hispanic origin[1] | 12.5 |

[1] Hispanics can be of any race.

SOURCE: "Overview of Race and Hispanic Origin," Census 2000 Brief (Census Bureau, March 2001).

If the respondent indicates that his or her race is "other" (a category not shown to the respondent), he or she was asked for more-specific information.

Once the results of this test are analyzed and the new questions finalized, a new methodology for determining race and ethnicity will be implemented in the CPS in 2003.

With regard to the measurement of persons with disabilities, BLS, along with the Department of Labor's Presidential Task Force on the Employment of Adults with Disabilities, is leading a multi-agency effort to design a short set of questions for use in a household survey (the CPS) that would identify persons with disabilities. This effort was mandated in 1998 by Executive Order 13078, which directed BLS to develop a statistically reliable method of determining the employment rate of adults with disabilities.

Work on the project began in 1999 with a careful examination of all the major disability survey instruments. The exhaustive review of these instruments revealed serious problems with the question sets that were used. Consequently, BLS had to conduct further research and testing of individual disability questions found in various surveys to try to construct a minimum set of questions needed to identify people with disabilities.

The set of questions identified in this phase was then placed in a major, nationwide survey (the National Comorbidity Survey—or NCS) for testing in a live household survey environment. Because the NCS focuses on disability issues, particularly mental illness, a rigorous comparison of the results from the test questions with those from the regular NCS questions will reveal how well (or poorly) the test questions identify persons with disabilities, and how the questions might be improved.

## Conclusion

The race and ethnic mix of the Nation's population has diversified considerably since colonial times, as shown in table 1-18. The ways in which minorities have been counted, first in the decennial censuses and then in the CPS, have evolved over time, reflecting, in part, a need for data to describe this growing diversity. The waves of immigrants from different parts of the world obviously have spurred the development of questions in the census asking about country of origin. The migration of blacks from the South focused national attention on the problems of blacks and created a demand for more data.

It took time, of course, for this demand to be met. Statistical theory, survey methodologies, and automated data processing technologies needed to be developed and refined.

The classification methodology for race has changed. At first, it was assumed that census enumerators and CPS interviewers could distinguish racial groups simply by observation and community standards. As researchers began to realize that race was much more complex than a set of physical attributes, interviewers were instructed to ask respondents about their race. The situation has now evolved to the point that respondents can choose to identify themselves with more than one racial group, thus creating a new category—multiracial.

What does the future hold? Probably more of the same. Barring a return to the exclusionary immigration policies of the 1920s, the United States likely will continue to be a nation in which increasing racial and ethnic diversity is the rule, not the exception. As in the past, people of diverse backgrounds will continue to contribute to a common culture, while maintaining many elements of their own cultural identities that help link them to their origins. As researchers, policymakers, and the public try to understand this process and deal with some of the problems that will inevitably arise (if past history is any indication), there will be continuing demands to develop and refine statistical measures that better illuminate the changing race and ethnic characteristics of America's population.

Table 1-1. **Geographic area of birth of the foreign-born population in the United States, 1850 to 2000**

| Geographic Area | Year | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1850 | 1860 | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1960[1] | 1970[1] | 1980[1] | 1990[1] | 2000[2] |
| Total foreign born (in thousands) | 2,244.6 | 4,138.7 | 5,567.2 | 6,679.9 | 9,249.5 | 10,341.3 | 13,515.9 | 13,920.7 | 14,204.1 | 9,738.1 | 9,619.3 | 14,079.9 | 19,767.3 | 28,379.0 |
| **Percent distribution** | | | | | | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Europe | 90.5 | 92.0 | 88.8 | 86.1 | 86.8 | 85.9 | 87.4 | 85.6 | 83.0 | 74.5 | 59.7 | 36.6 | 22.0 | 15.3 |
| Northern and Western | 90.1 | 91.2 | 87.0 | 82.3 | 78.8 | 69.7 | 54.1 | 44.8 | 41.2 | 34.2 | 27.3 | 16.9 | 10.4 | – |
| Ireland | 42.8 | 38.9 | 33.3 | 27.8 | 20.2 | 15.6 | 10.0 | 7.5 | 5.2 | 3.5 | 2.6 | 1.4 | .9 | – |
| Southern and Eastern | .4 | .8 | 1.7 | 3.7 | 7.9 | 16.2 | 33.3 | 40.7 | 41.7 | 40.1 | 32.1 | 19.5 | 11.6 | – |
| Asia | .1 | .9 | 1.2 | 1.6 | 1.2 | 1.2 | 1.4 | 1.7 | 1.9 | 5.0 | 8.6 | 18.0 | 25.2 | 25.5 |
| China | (3) | .9 | 1.1 | 1.6 | 1.2 | .8 | .4 | .3 | .3 | 1.0 | 1.8 | 2.0 | 2.7 | – |
| Latin America | .9 | .9 | 1.0 | 1.3 | 1.2 | 1.3 | 2.1 | 4.2 | 5.6 | 9.3 | 18.8 | 31.1 | 42.5 | 51.0 |
| Mexico | .6 | .7 | .8 | 1.0 | .8 | 1.0 | 1.6 | 3.5 | 4.5 | 5.9 | 7.9 | 15.6 | 21.7 | – |
| Other | 8.5 | 6.2 | 9.0 | 10.9 | 10.8 | 11.6 | 9.1 | 8.5 | 9.5 | 11.1 | 13.0 | 14.3 | 10.3 | 8.1 |

[1] Indicates sample data.

[2] Annual average data from the Current Population Survey.

[3] Indicates less than 0.05 percent.

NOTE: Dash indicates data not available.

SOURCE: U.S. Census Bureau.

Table 1-2. **Labor force status of the population by age, sex, race, and Hispanic origin, annual averages, 2000**

(Numbers in thousands)

| Age and sex | Black | | | Hispanic origin | | | White | | |
|---|---|---|---|---|---|---|---|---|---|
| | Population | Labor force | Labor force as a percent of population | Population | Labor force | Labor force as a percent of population | Population | Labor force | Labor force as a percent of population |
| **TOTAL** | | | | | | | | | |
| Total, 16 years and older | 25,218 | 16,603 | 65.8 | 22,393 | 15,368 | 68.6 | 174,428 | 117,574 | 67.4 |
| 16 to 19 years | 2,468 | 967 | 39.2 | 2,341 | 1,083 | 46.3 | 12,707 | 7,075 | 55.7 |
| 20 to 24 years | 2,690 | 1,932 | 71.8 | 2,775 | 2,155 | 77.7 | 6,312 | 2,800 | 44.4 |
| 25 to 54 years | 14,931 | 12,155 | 81.4 | 13,667 | 10,928 | 80.0 | 97,730 | 82,796 | 84.7 |
| 55 to 64 years | 2,351 | 1,227 | 52.2 | 1,819 | 983 | 54.1 | 20,324 | 12,192 | 60.0 |
| 65 years and older | 2,778 | 322 | 11.6 | 1,791 | 218 | 12.2 | 28,947 | 3,749 | 13.0 |
| **Men** | | | | | | | | | |
| Total, 16 years and older | 11,320 | 7,816 | 69.0 | 11,064 | 8,919 | 80.6 | 84,647 | 63,861 | 75.4 |
| 16 to 19 years | 1,213 | 473 | 39.0 | 1,205 | 613 | 50.9 | 6,496 | 3,679 | 56.6 |
| 20 to 24 years | 1,235 | 906 | 73.4 | 1,457 | 1,299 | 89.2 | 7,420 | 6,308 | 85.0 |
| 25 to 54 years | 6,753 | 5,699 | 84.4 | 6,817 | 6,295 | 92.3 | 48,529 | 44,984 | 92.7 |
| 55 to 64 years | 1,015 | 580 | 57.1 | 826 | 573 | 69.4 | 9,811 | 6,692 | 68.2 |
| 65 years and older | 1,105 | 157 | 14.2 | 759 | 138 | 18.2 | 12,390 | 2,198 | 17.7 |
| **Women** | | | | | | | | | |
| Total, 16 years and older | 13,898 | 8,787 | 63.2 | 11,329 | 6,449 | 56.9 | 89,781 | 53,714 | 59.8 |
| 16 to 19 years | 1,255 | 494 | 39.4 | 1,136 | 470 | 41.4 | 6,211 | 3,396 | 54.7 |
| 20 to 24 years | 1,455 | 1,026 | 70.5 | 1,319 | 856 | 64.9 | 7,300 | 5,455 | 74.7 |
| 25 to 54 years | 8,178 | 6,455 | 78.9 | 6,849 | 4,633 | 67.7 | 49,200 | 37,813 | 76.9 |
| 55 to 64 years | 1,336 | 647 | 48.4 | 993 | 410 | 41.3 | 10,513 | 5,500 | 52.3 |
| 65 years and older | 1,673 | 165 | 9.9 | 1,032 | 80 | 7.7 | 16,557 | 1,550 | 9.4 |

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-3. **Labor force participation rates by sex, race, and Hispanic origin, annual averages, 1973-2000**

| Year | Black | | | Hispanic origin | | | White | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Men | Women | Total | Men | Women | Total | Men | Women |
| 1973 ................ | 60.2 | 73.4 | 49.3 | 60.2 | 81.5 | 41.0 | 60.8 | 79.4 | 44.1 |
| 1974 ................ | 59.8 | 72.9 | 49.0 | 61.1 | 81.7 | 42.4 | 61.4 | 79.4 | 45.2 |
| 1975 ................ | 58.8 | 70.9 | 48.8 | 60.8 | 80.7 | 43.2 | 61.5 | 78.7 | 45.9 |
| 1976 ................ | 59.0 | 70.0 | 49.8 | 60.8 | 79.6 | 44.3 | 61.8 | 78.4 | 46.9 |
| 1977 ................ | 59.8 | 70.6 | 50.8 | 61.6 | 80.9 | 44.3 | 62.5 | 78.5 | 48.0 |
| 1978 ................ | 61.5 | 71.5 | 53.1 | 62.9 | 81.1 | 46.6 | 63.3 | 78.6 | 49.4 |
| 1979 ................ | 61.4 | 71.3 | 53.1 | 63.6 | 81.3 | 47.4 | 63.9 | 78.6 | 50.5 |
| 1980 ................ | 61.0 | 70.3 | 53.1 | 64.0 | 81.4 | 47.4 | 64.1 | 78.2 | 51.2 |
| 1981 ................ | 60.8 | 70.0 | 53.5 | 64.1 | 80.6 | 48.3 | 64.3 | 77.9 | 51.9 |
| 1982 ................ | 61.0 | 70.1 | 53.7 | 63.6 | 79.7 | 48.1 | 64.3 | 77.4 | 52.4 |
| 1983 ................ | 61.5 | 70.6 | 54.2 | 63.8 | 80.3 | 47.7 | 64.3 | 77.1 | 52.7 |
| 1984 ................ | 62.2 | 70.8 | 55.2 | 64.9 | 80.6 | 49.7 | 64.6 | 77.1 | 53.3 |
| 1985 ................ | 62.9 | 70.8 | 56.5 | 64.6 | 80.4 | 49.3 | 65.0 | 77.0 | 54.1 |
| 1986 ................ | 63.3 | 71.2 | 56.9 | 65.4 | 81.0 | 50.1 | 65.5 | 76.9 | 55.0 |
| 1987 ................ | 63.8 | 71.1 | 58.0 | 66.4 | 81.0 | 52.0 | 65.8 | 76.8 | 55.7 |
| 1988 ................ | 63.8 | 71.0 | 58.0 | 67.4 | 81.9 | 53.2 | 66.2 | 76.9 | 56.4 |
| 1989 ................ | 64.2 | 71.0 | 58.7 | 67.6 | 82.0 | 53.5 | 66.7 | 77.1 | 57.2 |
| 1990 ................ | 64.0 | 71.0 | 58.3 | 67.4 | 81.4 | 53.1 | 66.9 | 77.1 | 57.4 |
| 1991 ................ | 63.3 | 70.4 | 57.5 | 66.5 | 80.3 | 52.3 | 66.6 | 76.5 | 57.4 |
| 1992 ................ | 63.9 | 70.7 | 58.5 | 66.8 | 80.7 | 52.8 | 66.8 | 76.5 | 57.7 |
| 1993 ................ | 63.2 | 69.6 | 57.9 | 66.2 | 80.2 | 52.1 | 66.8 | 76.2 | 58.0 |
| 1994 ................ | 63.4 | 69.1 | 58.7 | 66.1 | 79.2 | 52.9 | 67.1 | 75.9 | 58.9 |
| 1995 ................ | 63.7 | 69.0 | 59.5 | 65.8 | 79.1 | 52.6 | 67.1 | 75.7 | 59.0 |
| 1996 ................ | 64.1 | 68.7 | 60.4 | 66.5 | 79.6 | 53.4 | 67.2 | 75.8 | 59.1 |
| 1997 ................ | 64.7 | 68.3 | 61.7 | 67.9 | 80.1 | 55.1 | 67.5 | 75.9 | 59.5 |
| 1998 ................ | 65.6 | 69.0 | 62.8 | 67.9 | 79.8 | 55.6 | 67.3 | 75.6 | 59.4 |
| 1999 ................ | 65.8 | 68.7 | 63.5 | 67.7 | 79.8 | 55.9 | 67.3 | 75.6 | 59.6 |
| 2000 ................ | 65.8 | 69.0 | 63.2 | 68.6 | 80.6 | 56.9 | 67.4 | 75.4 | 59.8 |

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-4. **Unemployment rates by sex, race, and Hispanic origin, annual averages, 1973-2000**

| Year | Black | | | Hispanic origin | | | White | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 1973 | 9.4 | 8.0 | 11.1 | 7.5 | 6.7 | 9.0 | 4.3 | 3.8 | 5.3 |
| 1974 | 10.5 | 9.8 | 11.3 | 8.1 | 7.3 | 9.4 | 5.0 | 4.4 | 6.1 |
| 1975 | 14.8 | 14.8 | 14.8 | 12.2 | 11.4 | 13.5 | 7.8 | 7.2 | 8.6 |
| 1976 | 14.0 | 13.7 | 14.3 | 11.5 | 10.8 | 12.7 | 7.0 | 6.4 | 7.9 |
| 1977 | 14.0 | 13.3 | 14.9 | 10.1 | 9.0 | 11.9 | 6.2 | 5.5 | 7.3 |
| 1978 | 12.8 | 11.8 | 13.8 | 9.1 | 7.7 | 11.3 | 5.2 | 4.6 | 6.2 |
| 1979 | 12.3 | 11.4 | 13.3 | 8.3 | 7.0 | 10.3 | 5.1 | 4.5 | 5.9 |
| 1980 | 14.3 | 14.5 | 14.0 | 10.1 | 9.7 | 10.7 | 6.3 | 6.1 | 6.5 |
| 1981 | 15.6 | 15.7 | 15.6 | 10.4 | 10.2 | 10.8 | 6.7 | 6.5 | 6.9 |
| 1982 | 18.9 | 20.1 | 17.6 | 13.8 | 13.6 | 14.1 | 8.6 | 8.8 | 8.3 |
| 1983 | 19.5 | 20.3 | 18.6 | 13.7 | 13.6 | 13.8 | 8.4 | 8.8 | 7.9 |
| 1984 | 15.9 | 16.4 | 15.4 | 10.7 | 10.5 | 11.1 | 6.5 | 6.4 | 6.5 |
| 1985 | 15.1 | 15.3 | 14.9 | 10.5 | 10.2 | 11.0 | 6.2 | 6.1 | 6.4 |
| 1986 | 14.5 | 14.8 | 14.2 | 10.6 | 10.5 | 10.8 | 6.0 | 6.0 | 6.1 |
| 1987 | 13.0 | 12.7 | 13.2 | 8.8 | 8.7 | 8.9 | 5.3 | 5.4 | 5.2 |
| 1988 | 11.7 | 11.7 | 11.7 | 8.2 | 8.1 | 8.3 | 4.7 | 4.7 | 4.7 |
| 1989 | 11.4 | 11.5 | 11.4 | 8.0 | 7.6 | 8.8 | 4.5 | 4.5 | 4.5 |
| 1990 | 11.4 | 11.9 | 10.9 | 8.2 | 8.0 | 8.4 | 4.8 | 4.9 | 4.7 |
| 1991 | 12.5 | 13.0 | 12.0 | 10.0 | 10.3 | 9.6 | 6.1 | 6.5 | 5.6 |
| 1992 | 14.2 | 15.2 | 13.2 | 11.6 | 11.7 | 11.4 | 6.6 | 7.0 | 6.1 |
| 1993 | 13.0 | 13.8 | 12.1 | 10.8 | 10.6 | 11.0 | 6.1 | 6.3 | 5.7 |
| 1994 | 11.5 | 12.0 | 11.0 | 9.9 | 9.4 | 10.7 | 5.3 | 5.4 | 5.2 |
| 1995 | 10.4 | 10.6 | 10.2 | 9.3 | 8.8 | 10.0 | 4.9 | 4.9 | 4.8 |
| 1996 | 10.5 | 11.1 | 10.0 | 8.9 | 7.9 | 10.2 | 4.7 | 4.7 | 4.7 |
| 1997 | 10.0 | 10.2 | 9.9 | 7.7 | 7.0 | 8.9 | 4.2 | 4.2 | 4.2 |
| 1998 | 8.9 | 8.9 | 9.0 | 7.2 | 6.4 | 8.2 | 3.9 | 3.9 | 3.9 |
| 1999 | 8.0 | 8.2 | 7.8 | 6.4 | 5.6 | 7.6 | 3.7 | 3.6 | 3.8 |
| 2000 | 7.6 | 8.1 | 7.2 | 5.7 | 4.9 | 6.7 | 3.5 | 3.4 | 3.6 |

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-5. **Employed persons by occupation, race, Hispanic origin, and sex, annual averages, 2000**

(Percent distribution)

| Occupation | Black |  |  | Hispanic |  |  | White |  |  |
|---|---|---|---|---|---|---|---|---|---|
|  | Total | Men | Women | Total | Men | Women | Total | Men | Women |
| Total, 16 years and older (thousands) | 15,334 | 7,180 | 8,154 | 14,492 | 8,478 | 6,014 | 113,475 | 61,696 | 51,780 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Managerial and professional specialty | 21.8 | 18.5 | 24.8 | 14.0 | 11.4 | 17.8 | 31.1 | 29.2 | 33.4 |
| Executive, administrative, and managerial | 9.9 | 8.9 | 10.7 | 7.4 | 6.3 | 8.9 | 15.3 | 15.8 | 14.8 |
| Professional specialty | 12.0 | 9.6 | 14.1 | 6.7 | 5.1 | 8.9 | 15.8 | 13.4 | 18.6 |
| Technical, sales, and administrative support | 29.3 | 18.8 | 38.6 | 24.2 | 14.9 | 37.2 | 29.2 | 19.7 | 40.5 |
| Technicians and related support | 3.2 | 2.6 | 3.7 | 2.1 | 1.7 | 2.7 | 3.2 | 2.9 | 3.5 |
| Sales occupations | 9.4 | 7.6 | 10.9 | 9.6 | 7.8 | 12.1 | 12.5 | 11.9 | 13.2 |
| Administrative support, including clerical | 16.8 | 8.5 | 24.0 | 12.5 | 5.5 | 22.5 | 13.5 | 5.0 | 23.7 |
| Service occupations | 21.5 | 17.4 | 25.2 | 19.8 | 15.2 | 26.2 | 12.4 | 9.1 | 16.4 |
| Private household | .8 | (1) | 1.4 | 1.7 | .1 | 3.0 | .6 | (1) | 1.2 |
| Protective service | 3.1 | 4.7 | 1.6 | 1.4 | 2.0 | .6 | 1.6 | 2.5 | .6 |
| Service, except private household and protective | 17.7 | 12.6 | 22.1 | 16.6 | 13.1 | 21.6 | 10.2 | 6.5 | 14.6 |
| Precision production, craft, and repair | 7.8 | 14.2 | 2.1 | 14.3 | 22.2 | 3.3 | 11.6 | 19.5 | 2.1 |
| Operators, fabricators, and laborers | 18.5 | 29.0 | 9.1 | 22.1 | 28.1 | 13.6 | 12.9 | 18.4 | 6.4 |
| Machine operators, assemblers, and inspectors | 7.0 | 8.8 | 5.5 | 9.8 | 9.8 | 9.7 | 5.1 | 6.1 | 3.9 |
| Transportation and material moving occupations | 6.0 | 11.1 | 1.4 | 4.6 | 7.4 | .6 | 3.9 | 6.6 | .8 |
| Handlers, equipment cleaners, helpers, and laborers | 5.4 | 9.1 | 2.2 | 7.8 | 11.0 | 3.3 | 3.9 | 5.8 | 1.6 |
| Farming, forestry, and fishing | 1.1 | 2.1 | .2 | 5.6 | 8.2 | 1.8 | 2.8 | 4.0 | 1.3 |

[1] Indicates less than 0.05 percent.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-6. **Median usual weekly earnings[1] of full-time[2] wage and salary workers,[3] by sex, race, and Hispanic origin, annual averages, 1986-2000**

| Characteristic | Year | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| **Black** | | | | | | | | | | | | | | | |
| Both sexes | $291 | $301 | $314 | $319 | $329 | $348 | $357 | $369 | $371 | $383 | $387 | $400 | $426 | $445 | $468 |
| Men | 318 | 326 | 347 | 348 | 361 | 375 | 380 | 392 | 400 | 411 | 412 | 432 | 468 | 488 | 503 |
| Women | 263 | 275 | 288 | 301 | 308 | 323 | 335 | 348 | 346 | 355 | 362 | 375 | 400 | 409 | 429 |
| **Hispanic origin** | | | | | | | | | | | | | | | |
| Both sexes | 277 | 284 | 290 | 298 | 304 | 312 | 322 | 331 | 324 | 329 | 339 | 351 | 370 | 385 | 396 |
| Men | 299 | 306 | 307 | 315 | 318 | 323 | 339 | 346 | 343 | 350 | 356 | 371 | 390 | 406 | 414 |
| Women | 241 | 251 | 260 | 269 | 278 | 292 | 302 | 313 | 305 | 305 | 316 | 318 | 337 | 348 | 364 |
| **White** | | | | | | | | | | | | | | | |
| Both sexes | 370 | 383 | 394 | 409 | 424 | 442 | 458 | 475 | 484 | 494 | 506 | 519 | 545 | 573 | 591 |
| Men | 433 | 450 | 465 | 482 | 494 | 506 | 514 | 524 | 547 | 566 | 580 | 595 | 615 | 638 | 669 |
| Women | 294 | 307 | 318 | 334 | 353 | 373 | 387 | 401 | 408 | 415 | 428 | 444 | 468 | 483 | 500 |
| **EARNINGS RATIOS** | | | | | | | | | | | | | | | |
| Black to white | 78.6 | 78.6 | 79.7 | 78.0 | 77.6 | 78.7 | 77.9 | 77.7 | 76.7 | 77.5 | 76.5 | 77.1 | 78.2 | 77.7 | 79.2 |
| Black men to white men | 73.4 | 72.4 | 74.6 | 72.2 | 73.1 | 74.1 | 73.9 | 74.8 | 73.1 | 72.6 | 71.0 | 72.6 | 76.1 | 76.5 | 75.2 |
| Black women to white women | 89.5 | 89.6 | 90.6 | 90.1 | 87.3 | 86.6 | 86.6 | 86.8 | 84.8 | 85.5 | 84.6 | 84.5 | 85.5 | 84.7 | 85.8 |
| Hispanic to white | 74.9 | 74.2 | 73.6 | 72.9 | 71.7 | 70.6 | 70.3 | 69.7 | 66.9 | 66.6 | 67.0 | 67.6 | 67.9 | 67.2 | 67.0 |
| Hispanic men to white men | 69.1 | 68.0 | 66.0 | 65.4 | 64.4 | 63.8 | 66.0 | 66.0 | 62.7 | 61.8 | 61.4 | 62.4 | 63.4 | 63.6 | 61.9 |
| Hispanic women to white women | 82.0 | 81.8 | 81.8 | 80.5 | 78.8 | 78.3 | 78.0 | 78.1 | 74.8 | 73.5 | 73.8 | 71.6 | 72.0 | 72.0 | 72.8 |

[1] Earnings are expressed in nominal dollars.

[2] Full-time workers include persons who usually work 35 hours or more a week on their sole, or principal, job.

[3] Wage and salary workers exclude self-employed persons whether or not their businesses are incorporated.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-7. **Civilian labor force by age, sex, race, and Hispanic origin, 1988, 1998, and projected 2008**

(Numbers in thousands)

| Characteristic | Civilian labor force | | | Change, 1988-98 | | Change, 1998-2008 | |
|---|---|---|---|---|---|---|---|
| | 1988 | 1998 | 2008, projected | Number | Percent | Number | Percent |
| Total, 16 years and older | 121,669 | 137,673 | 154,576 | 16,004 | 13.2 | 16,903 | 12.3 |
| **Age** | | | | | | | |
| 16 to 24 years | 22,536 | 21,894 | 25,210 | -642 | -2.8 | 3,316 | 15.1 |
| 25 to 54 years | 84,041 | 98,718 | 104,133 | 14,677 | 17.5 | 5,415 | 5.5 |
| 55 years and older | 15,092 | 17,062 | 25,233 | 1,970 | 13.1 | 8,171 | 47.9 |
| **Sex** | | | | | | | |
| Men | 66,927 | 73,959 | 81,132 | 7,032 | 10.5 | 7,173 | 9.7 |
| Women | 54,742 | 63,714 | 73,444 | 8,972 | 16.4 | 9,730 | 15.3 |
| **Race and Hispanic origin** | | | | | | | |
| Black | 13,205 | 15,982 | 19,101 | 2,777 | 21.0 | 3,119 | 19.5 |
| Hispanic origin | 8,982 | 14,317 | 19,585 | 5,335 | 59.4 | 5,268 | 36.8 |
| Asian and other | 3,708 | 6,278 | 8,809 | 2,570 | 69.3 | 2,531 | 40.3 |
| White | 104,756 | 115,415 | 126,665 | 10,659 | 10.2 | 11,250 | 9.7 |

SOURCE: Table 2 in Howard N Fullerton, “Labor force projections to 2008: steady growth and changing composition,” *Monthly Labor Review*, November 1999, p. 20.

## Table 1-8. **Civilian labor force participation rates by sex, age, race, and Hispanic origin, 1988, 1998, and projected 2008**

(Numbers in thousands)

| Characteristic | Participation rates | | | Percentage-point change | |
|---|---|---|---|---|---|
| | 1988 | 1998 | 2008, projected | 1988 to 1998 | 1998 to 2008 |
| **Age and sex** | | | | | |
| Total, 16 years and older | 65.9 | 67.4 | 67.6 | 1.5 | 0.2 |
| 16 to 24 years | 68.4 | 65.9 | 66.2 | -2.5 | .3 |
| 25 to 54 years | 82.9 | 84.1 | 85.4 | 1.2 | 1.3 |
| 25 to 34 years | 83.3 | 84.6 | 85.9 | 1.3 | 1.3 |
| 35 to 44 years | 84.6 | 84.7 | 86.0 | .1 | 1.3 |
| 45 to 54 years | 79.6 | 82.5 | 84.3 | 2.9 | 1.8 |
| 55 years and older... | 30.0 | 31.3 | 36.8 | 1.3 | 5.5 |
| Men | 76.2 | 74.9 | 73.7 | -1.3 | -1.2 |
| 16 to 24 years | 72.4 | 68.4 | 68.0 | -4.0 | -.4 |
| 25 to 54 years | 93.6 | 91.8 | 91.3 | -1.8 | -.5 |
| 55 years and older | 39.9 | 39.1 | 43.5 | -.8 | 4.4 |
| Women | 56.6 | 59.8 | 61.9 | 3.2 | 2.1 |
| 16 to 24 years | 64.5 | 63.3 | 64.3 | -1.2 | 1.0 |
| 25 to 54 years | 72.7 | 76.5 | 79.7 | 3.8 | 3.2 |
| 55 years and older | 22.3 | 25.0 | 31.2 | 2.7 | 6.2 |
| **Race and Hispanic origin** | | | | | |
| Black | 63.8 | 65.6 | 66.3 | 1.8 | .7 |
| Men | 71.0 | 69.0 | 68.3 | -2.0 | -.7 |
| Women | 58.0 | 62.8 | 64.6 | 4.8 | 1.8 |
| Hispanic origin | 67.4 | 67.9 | 67.7 | .5 | -.2 |
| Men | 81.9 | 79.8 | 77.9 | -2.1 | -1.9 |
| Women | 53.2 | 55.6 | 57.9 | 2.4 | 2.3 |
| Asian and other | 65.0 | 67.0 | 66.9 | 2.0 | -.1 |
| Men | 74.4 | 75.5 | 74.0 | 1.1 | -1.5 |
| Women | 56.5 | 59.2 | 60.5 | 2.7 | 1.3 |
| White | 66.2 | 67.3 | 67.9 | 1.1 | .6 |
| Men | 76.9 | 75.6 | 74.5 | -1.3 | -1.1 |
| Women | 56.4 | 59.4 | 61.5 | 3.0 | 2.1 |

SOURCE: Table 3 in Howard N Fullerton, "Labor force projections to 2008: steady growth and changing composition," *Monthly Labor Review*, November 1999, p. 24.

Table 1-9. **Labor force participation rates of the foreign-born and native-born by selected characteristics, annual averages, 2000**

| Characteristic | Foreign-born | | | Native-born | | |
|---|---|---|---|---|---|---|
| | Total | Men | Women | Total | Men | Women |
| **Age** | | | | | | |
| Total, 16 years and older | 66.7 | 79.8 | 54.0 | 67.2 | 73.9 | 61.1 |
| 16 to 24 years | 60.2 | 70.6 | 47.8 | 66.6 | 68.4 | 64.9 |
| 25 to 34 years | 77.0 | 92.1 | 61.4 | 86.2 | 93.6 | 79.2 |
| 35 to 44 years | 82.1 | 94.0 | 69.7 | 85.3 | 92.4 | 78.4 |
| 45 to 54 years | 80.0 | 91.0 | 69.6 | 82.9 | 88.3 | 77.8 |
| 55 to 64 years | 59.1 | 73.6 | 47.3 | 59.2 | 66.5 | 52.4 |
| 65 years and older | 12.1 | 18.6 | 7.4 | 12.9 | 17.4 | 9.6 |
| **Education** [1] | | | | | | |
| Less than a high school diploma | 59.0 | 78.0 | 41.4 | 37.4 | 46.7 | 29.2 |
| High school graduates, no college | 66.5 | 81.4 | 54.1 | 64.4 | 74.3 | 55.9 |
| Some college, no degree | 72.5 | 81.7 | 63.9 | 72.2 | 79.2 | 65.9 |
| College graduates | 76.9 | 85.3 | 67.4 | 79.9 | 84.3 | 75.2 |
| **Race and ethnicity** [2] | | | | | | |
| Non-Hispanic black | 75.0 | 80.6 | 69.4 | 64.9 | 67.6 | 62.8 |
| Hispanic origin | 69.5 | 85.4 | 52.5 | 67.7 | 74.8 | 61.4 |
| Non-Hispanic Asian | 67.3 | 77.8 | 58.2 | 66.1 | 70.0 | 62.3 |
| Non-Hispanic white | 59.1 | 71.0 | 48.0 | 67.6 | 74.9 | 60.8 |

[1] Data by educational attainment are for persons aged 25 years and older.

[2] Data for race and ethnicity groups will not sum to totals, because data for the "other races" group are not presented.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-10. **Unemployment rates of the foreign-born and native-born by selected characteristics, annual averages, 2000**

| Characteristic | Foreign-born | | | Native-born | | |
|---|---|---|---|---|---|---|
| | Total | Men | Women | Total | Men | Women |
| **Age** | | | | | | |
| Total, 16 years and older | 4.2 | 3.8 | 4.9 | 4.0 | 3.9 | 4.0 |
| 16 to 24 years | 7.9 | 7.4 | 8.7 | 9.5 | 10.0 | 8.9 |
| 25 to 34 years | 3.9 | 3.1 | 5.1 | 3.7 | 3.5 | 3.9 |
| 35 to 44 years | 3.8 | 3.2 | 4.7 | 2.9 | 2.7 | 3.1 |
| 45 to 54 years | 3.2 | 2.9 | 3.5 | 2.4 | 2.4 | 2.3 |
| 55 to 64 years | 3.9 | 3.8 | 4.1 | 2.3 | 2.3 | 2.3 |
| 65 years and older | 4.1 | 4.7 | 3.1 | 3.0 | 3.2 | 2.7 |
| **Education** [1] | | | | | | |
| Less than a high school diploma | 5.8 | 4.6 | 7.8 | 6.7 | 6.0 | 7.8 |
| High school graduates, no college | 3.3 | 2.9 | 3.9 | 3.5 | 3.5 | 3.5 |
| Some college, no degree | 3.3 | 3.0 | 3.7 | 2.8 | 2.6 | 3.0 |
| College graduates | 2.3 | 2.1 | 2.6 | 1.6 | 1.4 | 1.7 |
| **Race and ethnicity** [2] | | | | | | |
| Non-Hispanic black | 5.4 | 5.5 | 5.2 | 7.9 | 8.5 | 7.4 |
| Hispanic origin | 5.1 | 4.2 | 6.7 | 6.4 | 6.0 | 6.8 |
| Non-Hispanic Asian | 3.2 | 3.2 | 3.2 | 4.7 | 4.9 | 4.5 |
| Non-Hispanic white | 3.2 | 2.9 | 3.6 | 3.2 | 3.2 | 3.2 |

[1] Data by educational attainment are for persons aged 25 years and older.

[2] Data for race and ethnicity groups will not sum to totals, because data for the "other races" group are not presented.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-11. **Occupational distribution of the foreign-born and the native-born by selected characteristics, annual averages, 2000**

| Characteristic | Foreign-born |  |  | Native-born |  |  |
|---|---|---|---|---|---|---|
|  | Total | Men | Women | Total | Men | Women |
| Total (in thousands) | 16,954 | 10,067 | 6,887 | 118,254 | 62,226 | 56,028 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Executive, administrative, and managerial | 9.9 | 9.8 | 10.0 | 15.3 | 15.8 | 14.8 |
| Professional specialty | 13.5 | 12.9 | 14.5 | 15.9 | 13.6 | 18.5 |
| Technical | 2.9 | 2.7 | 3.2 | 3.3 | 3.0 | 3.6 |
| Sales | 9.8 | 8.7 | 11.3 | 12.4 | 11.8 | 13.1 |
| Administrative support | 8.9 | 4.6 | 15.3 | 14.5 | 5.6 | 24.5 |
| Service | 18.9 | 13.4 | 26.9 | 12.7 | 9.5 | 16.4 |
| Protective service | .8 | 1.1 | .4 | 1.9 | 2.9 | .8 |
| Private household | 1.8 | .1 | 4.4 | .4 | – | .8 |
| Other | 16.3 | 12.2 | 22.2 | 10.4 | 6.5 | 14.8 |
| Precision production, craft, and repair | 12.8 | 19.0 | 3.6 | 10.8 | 18.7 | 2.0 |
| Operators, fabricators, and laborers | 18.9 | 22.7 | 13.5 | 12.8 | 18.8 | 6.1 |
| Farming, forestry, and fishing | 4.4 | 6.3 | 1.6 | 2.2 | 3.3 | 1.1 |

NOTE: Dash indicates less than 0.05 percent.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-12. **Median weekly earnings of foreign-born and native-born full-time[1] wage and salary workers[2] by selected characteristics, annual averages, 2000**

| Characteristic | Foreign-born | | | Native-born | | |
|---|---|---|---|---|---|---|
| | Total | Men | Women | Total | Men | Women |
| **Age** | | | | | | |
| Total, 16 years and older | $447 | $477 | $407 | $591 | $676 | $500 |
| 16 to 24 years | 314 | 320 | 300 | 369 | 387 | 347 |
| 25 to 34 years | 433 | 443 | 418 | 574 | 624 | 500 |
| 35 to 44 years | 499 | 555 | 423 | 652 | 755 | 534 |
| 45 to 54 years | 516 | 586 | 445 | 690 | 804 | 579 |
| 55 to 64 years | 483 | 533 | 415 | 635 | 757 | 514 |
| 65 years and older | 381 | 408 | 344 | 457 | 580 | 385 |
| **Education [3]** | | | | | | |
| Less than a high school diploma | 322 | 355 | 286 | 389 | 464 | 313 |
| High school graduates, no college | 420 | 468 | 377 | 514 | 607 | 426 |
| Some college, no degree | 524 | 584 | 478 | 604 | 710 | 506 |
| College graduates | 852 | 964 | 724 | 902 | 1,032 | 764 |

[1] Full-time workers include persons who usually work 35 hours or more a week on their sole, or principal, job.

[2] Wage and salary workers exclude self-employed persons whether or not their businesses are incorporated.

[3] Data by educational attainment are for people aged 25 years and older.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

Table 1-13. **Consumer unit characteristics by race and ethnicity of reference person, 1999**

| Item | All consumer units | Race of reference person | | Hispanic origin of reference person | |
|---|---|---|---|---|---|
| | | White and other | Black | Hispanic | Non-Hispanic |
| Number of consumer units (in thousands) | 108,465 | 95,293 | 13,172 | 9,111 | 99,354 |
| Percent of all consumer units | 100.0 | 87.9 | 12.1 | 8.4 | 91.6 |
| Income before taxes[1] | $43,951 | $45,688 | $30,427 | $33,803 | $44,955 |
| Age of the reference person | 47.9 | 48.3 | 44.9 | 41.2 | 48.5 |
| **Average number in consumer unit** | | | | | |
| Persons | 2.5 | 2.5 | 2.7 | 3.5 | 2.4 |
| Children under 18 | .7 | .6 | .9 | 1.3 | .6 |
| Persons 65 and older | .3 | .3 | .2 | .2 | .3 |
| Earners | 1.3 | 1.4 | 1.3 | 1.6 | 1.3 |
| Vehicles | 1.9 | 2.0 | 1.3 | 1.6 | 2.0 |
| **Percent distribution** | | | | | |
| Housing tenure: | | | | | |
| Homeowner | 65 | 68 | 47 | 44 | 67 |
| With mortgage | 38 | 39 | 29 | 30 | 39 |
| Without mortgage | 27 | 28 | 17 | 14 | 28 |
| Renter | 35 | 32 | 53 | 56 | 33 |
| Race of reference person: | | | | | |
| Black | 12 | – | 100 | 4 | 13 |
| White and other | 88 | 100 | – | 96 | 87 |
| Education: | | | | | |
| Elementary (1-8) | 6 | 6 | 8 | 22 | 5 |
| High school (9-12) | 39 | 38 | 48 | 45 | 38 |
| College | 55 | 56 | 44 | 32 | 57 |
| Never attended and other | ([2]) | ([2]) | ([2]) | 1 | ([2]) |
| At least one vehicle owned or leased | 87 | 89 | 73 | 82 | 88 |

[1] Components of income and taxes are derived from "complete income reporters" only.
[2] Indicates less than 0.5 percent.

NOTE: Dash indicates data not applicable.

SOURCE: Bureau of Labor Statistics, Consumer Expenditure Survey.

Table 1-14. **Allocation of average annual expenditures per consumer unit, and aggregate expenditure shares by race of reference person, 1999**

| Item | Shares of total expenditures | | Aggregate expenditure shares | |
|---|---|---|---|---|
| | White and other | Black | White and other | Black |
| Number of consumer units (in thousands) | 95,293 | 13,172 | 95,293 | 13,172 |
| Percent of all consumer units | 87.9 | 12.1 | 87.9 | 12.1 |
| Total expenditures | $38,323 | $27,340 | $3.7 trillion | $0.4 trillion |
| Percent | 100.0 | 100.0 | 91.0 | 9.0 |
| Food | 13.4 | 15.1 | 89.9 | 10.0 |
| Food at home | 7.7 | 9.7 | 88.9 | 11.1 |
| Food away from home | 5.7 | 5.4 | 91.4 | 8.5 |
| Alcoholic beverages | .9 | .6 | 93.7 | 6.0 |
| Housing | 32.3 | 35.5 | 90.2 | 9.8 |
| Shelter | 18.8 | 20.1 | 90.5 | 9.5 |
| Owned dwellings | 12.5 | 9.8 | 92.8 | 7.2 |
| Rented dwellings | 5.0 | 9.8 | 83.9 | 16.1 |
| Other lodging | 1.3 | .5 | 96.4 | 3.7 |
| Utilities, fuels, and public services | 6.2 | 8.8 | 87.7 | 12.3 |
| Household operations | 1.8 | 1.7 | 91.7 | 8.3 |
| Housekeeping supplies | 1.3 | 1.3 | 91.0 | 8.8 |
| Household furnishings and equipment | 4.1 | 3.6 | 92.0 | 8.0 |
| Apparel and services | 4.5 | 6.9 | 86.9 | 13.1 |
| Transportation | 19.0 | 18.7 | 91.2 | 8.8 |
| Vehicle purchases (net outlay) | 9.0 | 8.7 | 91.3 | 8.7 |
| Gasoline and motor oil | 2.9 | 2.8 | 91.3 | 8.7 |
| Other vehicle expenses | 6.1 | 6.1 | 90.9 | 9.1 |
| Public transportation | 1.1 | 1.1 | 91.2 | 8.9 |
| Healthcare | 5.4 | 4.0 | 93.2 | 6.8 |
| Health insurance | 2.5 | 2.1 | 92.5 | 7.4 |
| Medical services | 1.6 | .9 | 94.8 | 5.2 |
| Drugs | 1.0 | .9 | 92.1 | 7.7 |
| Medical supplies | .3 | .2 | 93.5 | 6.2 |
| Entertainment | 5.3 | 3.4 | 93.9 | 6.0 |
| Personal care products and services | 1.1 | 1.5 | 88.1 | 11.9 |
| Reading | .4 | .3 | 93.9 | 6.2 |
| Education | 1.7 | 1.5 | 92.1 | 7.8 |
| Tobacco products and smoking supplies | .8 | .8 | 91.7 | 8.4 |
| Miscellaneous | 2.4 | 2.2 | 91.7 | 8.2 |
| Cash contributions | 3.3 | 2.0 | 94.4 | 5.6 |
| Personal insurance and pensions | 9.4 | 7.7 | 92.6 | 7.4 |

SOURCE: Bureau of Labor Statistics, Consumer Expenditure Surveys.

Table 1-15. **Consumer unit characteristics by ethnicity of reference person, 1994 and 1999**

| Item | Non-Hispanic reference person | | Hispanic reference person | |
|---|---|---|---|---|
| | 1994 | 1999 | 1994 | 1999 |
| Number of consumer units (in thousands) | 94,479 | 99,354 | 7,730 | 9,111 |
| Percent of all consumer units | 92.4 | 91.6 | 7.6 | 8.4 |
| Income before taxes[1] | $37,000 | $44,955 | $26,750 | $33,803 |
| Age of the reference person | 48.2 | 48.5 | 41.1 | 41.2 |
| **Average number in consumer unit** | | | | |
| Persons | 2.5 | 2.4 | 3.4 | 3.5 |
| Children under 18 | .7 | .6 | 1.3 | 1.3 |
| Persons 65 and older | .3 | .3 | .2 | .2 |
| Earners | 1.3 | 1.3 | 1.5 | 1.6 |
| Vehicles | 2.0 | 2.0 | 1.6 | 1.6 |
| **Percent distribution** | | | | |
| Housing tenure: | | | | |
| Homeowner | 65 | 67 | 42 | 44 |
| With mortgage | 37 | 39 | 28 | 30 |
| Without mortgage | 27 | 28 | 14 | 14 |
| Renter | 35 | 33 | 58 | 56 |
| Race of reference person: | | | | |
| Black | 12 | 13 | 3 | 4 |
| White and other | 88 | 87 | 97 | 96 |
| Education: | | | | |
| Elementary (1-8) | 7 | 5 | 25 | 22 |
| High school (9-12) | 43 | 38 | 45 | 45 |
| College | 49 | 57 | 29 | 32 |
| Never attended and other | 0 | (2) | 1 | 1 |
| At least one vehicle owned or leased | 86 | 88 | 80 | 82 |

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[1] Components of income and taxes are derived from "complete reporters" only.
[2] Indicates less than 0.5 percent.

SOURCE: Bureau of Labor Statistics, Consumer Expenditure Surveys.

Table1-16. **Average annual and aggregate expenditure shares by ethnicity of reference person, 1999**

| Item | Expenditure shares | | Aggregate shares | |
|---|---|---|---|---|
| | Hispanic reference person | Non-Hispanic reference person | Hispanic reference person | Non-Hispanic reference person |
| Number of consumer units (in thousands) | 9,111 | 99,354 | 9,111 | 99,354 |
| Percent of population | 8.4 | 91.6 | – | – |
| Total expenditures | $33,044 | $37,356 | $0.3 trillion | $3.7 trillion |
| Percent | 100.0 | 100.0 | 7.6 | 92.4 |
| Food | 16.6 | 13.3 | 9.4 | 90.6 |
| Food at home | 10.8 | 7.6 | 10.5 | 89.5 |
| Food away from home | 5.9 | 5.7 | 7.9 | 92.1 |
| Alcoholic beverages | .8 | .9 | 7.3 | 92.7 |
| Housing | 33.3 | 32.5 | 7.7 | 92.3 |
| Shelter | 20.5 | 18.8 | 8.1 | 91.9 |
| Owned dwellings | 9.6 | 12.4 | 5.9 | 94.1 |
| Rented dwellings | 10.4 | 5.1 | 14.2 | 85.8 |
| Other lodging | .5 | 1.3 | 3.1 | 96.9 |
| Utilities, fuels, and public services | 6.4 | 6.4 | 7.5 | 92.5 |
| Household operations | 1.4 | 1.8 | 5.9 | 94.1 |
| Housekeeping supplies | 1.3 | 1.3 | 7.7 | 92.3 |
| Household furnishings and equipment | 3.6 | 4.1 | 6.7 | 93.3 |
| Apparel and services | 6.3 | 4.6 | 10.2 | 89.8 |
| Transportation | 20.6 | 18.8 | 8.2 | 91.8 |
| Vehicle purchases (net outlay) | 10.2 | 8.8 | 8.5 | 91.5 |
| Gasoline and motor oil | 3.4 | 2.8 | 8.9 | 91.1 |
| Other vehicle expenses | 6.0 | 6.1 | 7.4 | 92.6 |
| Public transportation | 1.0 | 1.1 | 7.3 | 92.7 |
| Healthcare | 3.4 | 5.4 | 4.8 | 95.2 |
| Health insurance | 1.6 | 2.6 | 4.9 | 95.1 |
| Medical services | .9 | 1.6 | 4.7 | 95.3 |
| Drugs | .6 | 1.0 | 4.9 | 95.1 |
| Medical supplies | .2 | .3 | 4.8 | 95.2 |
| Entertainment | 3.8 | 5.2 | 5.6 | 94.4 |
| Personal care products and services | 1.2 | 1.1 | 8.5 | 91.5 |
| Reading | .2 | .4 | 3.7 | 96.3 |
| Education | 1.1 | 1.8 | 4.9 | 95.1 |
| Tobacco products and smoking supplies | .5 | .8 | 4.8 | 95.2 |
| Miscellaneous | 1.9 | 2.4 | 6.2 | 93.8 |
| Cash contributions | 2.1 | 3.3 | 4.8 | 95.2 |
| Personal insurance and pensions | 8.2 | 9.4 | 6.6 | 93.4 |

SOURCE: Bureau of Labor Statistics, Consumer Expenditure Surveys.

Table 1-17. **Aggregate expenditure shares for Hispanics, 1994 and 1999**

| Item | 1994 | 1999 |
|---|---|---|
| Number of consumer units (in thousands) | 7,730 | 9,111 |
| Percent of all consumer units | 7.6 | 8.4 |
| Average annual expenditures per consumer unit | $26,433 | $33,044 |
| **Percent of all consumer expenditures** | | |
| Total expenditures | 6.3 | 7.6 |
| Food | 7.7 | 9.4 |
| Food at home | 9.3 | 10.5 |
| Food away from home | 5.2 | 7.9 |
| Alcoholic beverages | 5.7 | 7.3 |
| Housing | 6.7 | 7.7 |
| Shelter | 7.1 | 8.1 |
| Owned dwellings | 5.0 | 5.9 |
| Rented dwellings | 12.1 | 14.2 |
| Other lodging | 2.5 | 3.1 |
| Utilities, fuels, and public services | 6.8 | 7.5 |
| Household operations | 5.5 | 5.9 |
| Housekeeping supplies | 6.9 | 7.7 |
| Household furnishings and equipment | 5.3 | 6.7 |
| Apparel and services | 8.7 | 10.2 |
| Transportation | 6.1 | 8.2 |
| Vehicle purchases (net outlay) | 6.0 | 8.5 |
| Gasoline and motor oil | 6.9 | 8.9 |
| Other vehicle expenses | 5.7 | 7.4 |
| Public transportation | 5.9 | 7.3 |
| Healthcare | 4.6 | 4.8 |
| Health insurance | 4.4 | 4.9 |
| Medical services | 5.3 | 4.7 |
| Drugs | 3.9 | 4.9 |
| Medical supplies | 3.6 | 4.8 |
| Entertainment | 4.5 | 5.6 |
| Personal care products and services | 8.6 | 8.5 |
| Reading | 3.5 | 3.7 |
| Education | 5.5 | 4.9 |
| Tobacco products and smoking supplies | 4.0 | 4.8 |
| Miscellaneous | 5.8 | 6.2 |
| Cash contributions | 3.6 | 4.8 |
| Personal insurance and pensions | 5.2 | 6.6 |

SOURCE: Bureau of Labor Statistics, Consumer Expenditure Surveys.

Table 1-18. **Selected characteristics of the resident population, 1750 to 1999**

(In thousands)

| Date | Sex | | Race | | | | | Hispanic origin[1] |
|---|---|---|---|---|---|---|---|---|
| | | | | | Other | | | |
| | Men | Women | White | Black | Total | American Indian, Eskimo, Aleut | Asian, Pacific Islander | |
| **Estimated:** [2] | | | | | | | | |
| 1750 | – | – | 1,040 | 220 | – | – | – | – |
| 1754 | – | – | 1,165 | 260 | – | – | – | – |
| 1760 | – | – | 1,385 | 310 | – | – | – | – |
| 1770 | – | – | 1,850 | 462 | – | – | – | – |
| 1780 | – | – | 2,383 | 562 | – | – | – | – |
| **Decennial Census Data:** . | | | | | | | | |
| 1790[3] | – | – | 3,172 | 757 | – | – | – | – |
| 1800[3] | – | – | 4,306 | 1,002 | – | – | – | – |
| 1810[4] | – | – | 5,862 | 1,191 | – | – | – | – |
| 1820[4] | – | – | 7,867 | 1,772 | – | – | – | – |
| 1830[4] | – | – | 10,537 | 2,329 | – | – | – | – |
| 1840[4] | – | – | 14,196 | 2,874 | – | – | – | – |
| 1850[3] | – | – | 19,553 | 3,639 | – | – | – | – |
| 1860[5] | – | – | 26,923 | 4,442 | – | – | – | – |
| 1870[5] | – | – | 33,589 | 4,880 | – | – | – | – |
| 1880[5] | – | – | 43,403 | 6,581 | – | – | – | – |
| 1890[5] | – | – | 54,984 | 7,470 | – | – | – | – |
| 1900[3] | 38,816 | 37,178 | 66,809 | 8,834 | 351 | – | – | – |
| 1910[3] | 47,332 | 44,640 | 81,732 | 9,828 | 413 | – | – | – |
| 1920[3] | 53,900 | 51,810 | 94,821 | 10,463 | 427 | – | – | – |
| 1930[3] | 62,137 | 60,638 | 110,287 | 11,891 | 597 | – | – | – |
| 1940[3] | 66,062 | 65,608 | 118,215 | 12,866 | 589 | – | – | – |
| 1950[3] | 74,833 | 75,864 | 134,942 | 15,042 | 713 | – | – | – |
| 1950[3] | 75,187 | 76,139 | 135,150 | 15,045 | 1,131 | – | – | – |
| 1960 | 88,331 | 90,992 | 158,832 | 18,872 | 1,620 | – | – | – |
| 1970[6] | 98,926 | 104,309 | 178,098 | 22,581 | 2,557 | – | – | – |
| 1980[7,8] | 110,053 | 116,493 | 194,713 | 26,683 | 5,150 | 1,420 | 3,729 | 14,609 |
| 1990[7,9] | 121,284 | 127,507 | 208,741 | 30,517 | 9,534 | 2,067 | 7,467 | 22,379 |

Table 1-18. **Selected characteristics of the resident population, 1750 to 1999 —Continued**

(In thousands)

| Date | Sex | | Race | | | | | Hispanic origin[1] |
|---|---|---|---|---|---|---|---|---|
| | | | | | Other | | | |
| | Men | Women | White | Black | Total | American Indian, Eskimo, Aleut | Asian, Pacific Islander | |
| **Current Population Survey data:** | | | | | | | | |
| 1991 (July 1)[10] .......... | 122,956 | 129,197 | 210,975 | 31,137 | 10,041 | 2,112 | 7,929 | 23,391 |
| 1992 (July 1)[10] .......... | 124,424 | 130,606 | 212,874 | 31,683 | 10,473 | 2,149 | 8,324 | 24,283 |
| 1993 (July 1)[10] .......... | 125,788 | 131,995 | 214,691 | 32,195 | 10,897 | 2,187 | 8,710 | 25,222 |
| 1994 (July 1)[10] .......... | 127,049 | 133,278 | 216,379 | 32,672 | 11,276 | 2,222 | 9,054 | 26,160 |
| 1995 (July 1)[10] .......... | 128,294 | 134,510 | 218,023 | 33,116 | 11,664 | 2,256 | 9,408 | 27,107 |
| 1996 (July 1)[10] .......... | 129,504 | 135,724 | 219,636 | 33,537 | 12,055 | 2,290 | 9,765 | 28,099 |
| 1997 (July 1)[10] .......... | 130,783 | 137,001 | 221,333 | 33,989 | 12,461 | 2,326 | 10,135 | 29,182 |
| 1998 (July 1)[10] .......... | 132,030 | 138,218 | 222,980 | 34,427 | 12,840 | 2,361 | 10,479 | 30,252 |
| 1999 (July 1)[10] .......... | 133,277 | 139,414 | 224,611 | 34,862 | 13,217 | 2,397 | 10,820 | 31,337 |

[1] Persons of Hispanic origin may be of any race.

[2] Data are from Wright, Carroll D., *The History and Growth of the United States Census* (New York, Johnson Reprint Corporation, 1966).

[3] Excludes Alaska and Hawaii.

[4] Source: *Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 2* (Census Bureau, 1975).

[5] See Campbell J. Gibson and Emily Lennon, "Historical Census Statistics on the Foreign-born Population of the United States: 1850-1990," Population Division Working Paper No. 29 (Census Bureau, February 1999).

[6] The revised 1970 resident population count is 203,302,031, which incorporates changes due to errors found after tabulations were completed. The race and sex data shown here reflect the official 1970 census count.

[7] The race data shown have been modified to be consistent with the guidelines in Federal Statistical Directive No. 15 issued by the Office of Management and Budget. Figures are not comparable with the 1990 census race categories.

[8] Total population count has been revised since the 1980 census publications. Numbers by age, race, Hispanic origin, and sex have not been corrected.

[9] The April 1, 1990, census count (248,765,170) includes count resolution corrections processed through August 1997 and does not include adjustments for census coverage errors except for adjustments estimated for the 1995 Census Test in Oakland, CA; Paterson, NJ; and six Louisiana parishes. These adjustments amounted to a total of 55,297 persons.

[10] Estimated.

NOTE: Dash indicates data not available.

SOURCE: *Statistical Abstract of the United States, 2000: The National Data Book* (Census Bureau, 2000).

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## Endnotes

[1] See Baseler, 1998, p. 34.

[2] See Hatton and Williamson, 1998, p.7.

[3] See Thomas, 1997, p. 552.

[4] See Thomas, p. 568.

[5] See Jenks, Lauck, and Smith, 1922, p. 368.

[6] See Hatton and Williamson, 1998, p. 75.

[7] Immigration and Naturalization Service, "Immigrants, Fiscal Year 1998," *Statistical Yearbook of the Immigration and Naturalization Service, 1998* (Washington, U.S. Government Printing Office, 2001), table 2.

[8] See Japiske, 1994.

[9] See Hatton and Williamson, 1998, p.75.

[10] See Gyory, 1998, p. 31.

[11] Gyory, p.40.

[12] Daniels, Roger, *Asian America: Chinese and Japanese in the United States since 1850* (Seattle, University of Washington Press, 1988), p. 52.

[13] See Gyory, p. 216.

[14] See Chan, 2000.

[15] See Hatton and Williamson, 1998, p.124.

[16] See Hatton and Williamson, p. 149.

[17] See Schmidley and Gibson, 1999, p.9.

[18] See Schmidley and Gibson, 1999, p. 9.

[19] See Wynn, "Black Americans," 1993, p. 251.

[20] See Rutkoff and Scott, 2000.

[21] See Wynn, "Black Americans," 1993, p. 262.

[22] See McKinnon and Humes, 2000, p. 1.

[23] See Wright, 1900, p. 13.

[24] "All other persons" referred to slaves, who were assigned a count equal to three-fifths of free persons.

[25] See Perlman, 2001.

[26] See Norwood and Klein, 1989, p. 16.

[27] The CPS is a monthly survey of households conducted for BLS by the Census Bureau through a scientifically selected sample designed to represent the civilian noninstitutional population. Respondents are interviewed to obtain information about the employment status of each member of the household 16 years of age and older. The inquiry relates to activity or status during the calendar week, Sunday through Saturday, which includes the 12th day of the month. This is known as the "reference week." Actual field interviewing is conducted in the following week, referred to as the "survey week."

Each month about 50,000 occupied units are eligible for interview. Some 3,200 of these households are contacted but interviews are not obtained because the occupants are not at home after repeated calls or are unavailable for other reasons. This represents a noninterview rate for the survey that ranges between 6 and 7 percent. In addition to the 50,000 occupied units, there are 9,000 sample units in an average month, which are visited but found to be vacant or otherwise not eligible for enumeration. Part of the sample is changed each month. The rotation plan, as explained later, provides for three-fourths of the sample to be common from one month to the next, and one-half to be common with the same month a year earlier.

[28] For a brief history of the Current Population Survey, see "Design and Methodology, Current Population Survey," Technical Paper 63 (Census Bureau, March 2000), pp. 2-1 through 2-5.

[29] "AAA recommends 'race' be scrapped; suggests new government categories," Press Release/OMB 15 (American Anthropological Association, Sept. 8, 1997).

[30] Ibid.

[31] See *Enumerator's Reference Manual, Current Population Survey and Housing Vacancy Survey* (Census Bureau, January 1961), p. D-50.

[32] See *Interviewer's Reference manual, Current Population Survey* (Census Bureau, December 1971 (rev. July 1985)), pp. D3-44–D3-45.

[33] Ibid., p. D3-48.

[34] See *Current Population Survey Interviewing Manual* (Census Bureau, January 1999), pp. C3-23–C3-28.

[35] See "Labor Conditions," 1920, p. 225.

[36] *Annual Report on the Labor Force: 1949, Current Population Reports*, Series P-50, No. 19 (Census Bureau, Mar. 2, 1951), table 18, p. 23.

[37] *Annual Report on the Labor Force: 1955, Current Population Reports*, Series P-50, No. 67 (Census Bureau, March 1956), table 4, p. 20.

[38] "Nonwhite" as a distinct racial category has not been in use for a number of years. Hence, data by race that can be found in publications like the *Handbook of Labor Statistics* (as published by the Bureau of Labor Statistics) or in Labor Force Statistics from the Current Population Survey, are only for whites. But, of course, the nonwhite estimates can be de-

rived by subtraction.

[39] See Gloria P. Green, Khoan tan Dinh, John A. Priebe, and Ronald A. Tucker, "Revisions in the Current Population Survey Beginning in January 1983," *Employment and Earnings*, February 1983, p. 14.

[40] See *Employment and Earnings*, April 1974, p. 137. "The term 'Negro' is used in tables when the relevant data provided is for Negroes exclusively."

[41] See *Employment and Earnings*, April 1974, table A-60, p. 63.

[42] See "The Employment Situation: January 1982," USDL 82-40 (Bureau of Labor Statistics, Feb. 5, 1982).

[43] See *Employment and Earnings*, February 1983, table 3, p. 20.

[44] Prior to 1972, data were for "black and other," or equivalently, "nonwhites." This change made very little difference in terms of labor force data at the time since more than 90 percent of nonwhites were blacks.

[45] See Howard N Fullerton, Jr., "Labor force projections to 2008: steady growth and changing composition," *Monthly Labor Review*, November 1999, pp. 19-32.

[46] The foreign-born population, although primarily composed of legally admitted immigrants, includes refugees, temporary residents such as students and temporary workers, and undocumented immigrants. "Natives" are persons born in the United States, Puerto Rico, or an outlying area of the United States such as Guam or the U.S. Virgin Islands, and persons who were born in a foreign country but who had at least one parent who was a U.S. citizen. All others are foreign-born.

[47] Income data are described for complete reporters only. In general, a consumer unit that provides values for at least one of the major sources of its income, such as wages and salaries, self-employment, and Social Security income is classified as a "complete income reporter." However, even complete income reporters may not provide a complete accounting of all sources of income.

[48] Note that total shelter, as defined in tables 14 and 15, omits utilities, but includes other lodging (such as for vacation stays or room at school). Because blacks are noticeably underrepresented in other lodging (4 percent), this diminishes the overall shelter share. However, other lodging is a small component of shelter for both black and nonblack consumers.

| Social and Economic Timeline | |
|---|---|
| 1901 | President McKinley assassinated |
| 1902 | United States passes the Chinese Exclusion Act |
| 1903 | Movie, "The Great Train Robbery" |
| 1904 | New York City subway opens |
| 1906 | Upton Sinclair writes *The Jungle* |
| 1908 | Ford introduces the Model-T |
| 1909 | NAACP is founded |
| 1911 | Standard Oil Company broken up<br>Triangle Shirtwaist Factory fire |
| 1913 | Personal income tax introduced in the United States |
| 1916 | First self-service grocery store opens |
| 1917 | Russian Revolution |
| 1919 | Prohibition begins in the United States |
| 1920 | Women granted the right to vote in the United States |
| 1921 | Extreme inflation in Germany |
| 1929 | New York Stock Market crashes |
| 1930 | Sliced bread available |
| 1933 | Prohibition ends in the United States |
| 1934 | Cheeseburger created |
| 1935 | CIO formed<br>John Maynard Keynes suggests New Economic Theory |
| 1939 | Movie, "Gone with the Wind" |
| 1940 | Nylons on the market |
| 1944 | Ballpoint pens go on sale |
| 1946 | Dr. Spock publishes *The Common Book of Baby and Child Care* |
| 1950 | First modern credit card introduced |
| 1952 | Car seat belts introduced |
| 1954 | Surgeon General's report says cigarettes cause cancer<br>Segregation ruled illegal in the United States |
| 1955 | AFL and CIO merge<br>McDonald's Corporation founded |
| 1960 | First televised Presidential debates<br>Birth control for women "The Pill" introduced |
| 1962 | Rachel Carson publishes *Silent Spring* |
| 1963 | President Kennedy assassinated |
| 1966 | Mass draft protests in the United States |
| 1967 | First Super Bowl |
| 1972 | Watergate scandal begins |
| 1973 | Abortion legalized in the United States |
| 1974 | President Nixon resigns |
| 1975 | Microsoft founded |
| 1979 | Sony introduces the Walkman |
| 1980 | Ted Turner establishes CNN |
| 1984 | Huge poison gas leak in Bhopal, India |
| 1985 | New Coke hits the market with a thud |
| 1987 | New York Stock Exchange suffers huge drop on "Black Monday" |
| 1989 | Fall of the Berlin Wall |
| 1997 | Tallest buildings in the world built in Kuala Lumpur |
| 1999 | The Euro becomes the New European currency |

# Chapter 2

# The Evolution of Compensation in a Changing Economy

Over the course of the 20th century, American workers have witnessed an evolution in compensation. Through the century, the changes in the methods of pay have usually been stimulated by some form of imbalance caused by a crisis or demographic shift. For the 20th century American worker, no greater crisis was experienced than the Great Depression, a watershed in how employers paid their workers. But growth in unionization and the increase in the number of working women, among other shifts, have also contributed to changes in pay practices.

Payment for labor services has evolved from simple piecework pay to sophisticated contractual compensation packages. At the turn of the 20th century in America, few workers would have received anything more than wages as compensation for their labor services. But by the close of the century, a typical worker received more than 25 percent compensation in the form of benefits. These benefits, which were termed fringe benefits for most of the century, consisted of employer-paid items such as health, life and unemployment insurance; retirement and savings; and holiday and vacation leave. Today, benefit components making up the compensation package continue to evolve, with variable pay plans—such as profit-sharing and stock options—growing in importance. Additionally, emerging benefits, such as family care, are becoming widely available.

### Structural change and American labor

For the first third of the 20th century, compensation for industrial workers was composed mainly of wages that were based on a worker's production performance, typically a piece rate paid on each unit produced. (This chapter focuses on compensation of industrial workers. Agricultural and domestic workers are excluded, as a substantial number received a significant portion of their compensation in kind. In kind pay, such as room and meals, is not captured in most compensation surveys.)

The setting of piece rates for unit production was rarely prescribed by any formal managerial or industrial standards but was typically at the discretion of the individual shop foreman. Since wage standards would not come until later—through legislation and union activity—many workers were at the mercy of

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current business conditions in their individual industries.

Also, at this time, a structural shift in employment, driven by technological advances and product demand, had little impact on the way workers were paid. That is not to say that real wages were stagnant; however. Weekly earnings of workers in manufacturing moderately increased for most quinquenniums, with substantial increases coming during the World War I years, when labor markets were constrained.[1] (See box on p. 5)

With no modern-day benefits, workers and their families bore the economic risks that were associated with sickness, unemployment, and old age. Household savings provided the main source of security, with charitable organizations sometimes helping. At this time, labor unions were actually reluctant to take up the cause for economic insurance benefits, as unions were adverse to employers—or the government—mingling in such worker affairs. American labor unions and their members espoused freedom and independence, favoring a pro-labor capitalistic approach.

Labor's stance was traceable to the many in the labor movement who had an agrarian heritage of self-sufficiency and independence that provided little ideological rationale for bargaining for security benefits. The sentiment of the time could be heard in the words of Samuel Gompers, president of the American Federation of Labor from 1886 to 1924, who argued in 1917 that compulsory benefits, "...weakens independence of spirit, delegates to outside authorities some of the powers and opportunities that rightfully belong to wage earners, and breaks down industrial freedom by exercising control over workers through a central bureaucracy."[2] Labor's attitude towards self-sufficiency and independence would not weaken until some 15 years later under the devastation of the Great Depression.

### The influence of Social Security legislation

The burden of the Great Depression would prove too great for households and charitable organizations to bear. At no time in modern America's history had such a large proportion of workers been without jobs; estimates of annual average unemployment reached a rate approaching 25 percent. The depth of the Depression would ultimately provide the catalyst for change in labor's attitude about self-sufficiency that would, in turn, give way to changes in how American workers were paid.

President Roosevelt's New Deal legislation provided sweeping change. In 1935, with so many with so little, the Federal Government passed, with the approval of labor, the Social Security Act (SSA). The passage of this legislation provided a nationwide system of social insurance that today still protects workers from loss of wages stemming from unemployment and old age. The 1935 SSA was the first thread of a public social security net that would limit the economic hardship of workers and their families.

When first enacted, the SSA provided coverage for fewer than fewer 60 percent of the workforce; but following several amendments, coverage soon expanded to more than 90 percent. Aside from increasing the numbers covered, amendments extended benefits to dependents and survivors and to the disabled in 1939 and 1956, respectively. The Act was broadened in scope, in 1965, to provide medical coverage to the elderly retired.

Social Security was the first nationwide *legally required* benefit. Although some States beforehand had enacted legislation requiring employers to provide workers' compensation benefits, no State had a program that protected workers' incomes through economic cycles or old age. The passage of the SSA and the hardships experienced during the Great Depression would pave the way for a series of changes in the composition of pay; but the *drafting* of this seminal act purposefully maintained, at least in part, the spirit of self-sufficiency. From its inception, the economic protections afforded under the SSA have been treated as social insurance in which participation was a right acquired by working, and the premiums shared equally by employer and employee through payroll taxes.

### The right to bargain collectively

In the wake of the Great Depression, important pro-labor legislation was passed, but none was more fundamental than the National Labor Relations Act of 1935 (Wagner Act). The Wagner act guaranteed the twin rights of workers to join labor unions and to bargain collectively. This act turned the tide for union labor that had too often encountered court defeats in cases of management and union entanglements. The immediate impact of the Wagner Act can be seen in the increase in union membership. Unions swelled more than two-fold between 1935 and 1940, rising from 3.8 million to 9 million—a stark change of events from the declines experienced just a few years earlier. This quinquennium growth would be matched by no other period in the history of American labor.

The rapid growth in strength of unions, numerically and financially, continued through the World War II years. After the war, unions—with their newfound strength—pressed hard for higher wages, and when not met, orchestrated widespread strikes that would, in the end, raise the public's ire. Although the Wagner Act had prohibited unfair labor practices by management, there were no prohibitions on union's behavior. Similar to the cries heard at the turn of the century for trust busting, the public demanded that Congress enact legislation that would restrict and control union behavior. As an amendment to the Wagner Act, in 1947, Congress passed the Labor Management Relations (Taft-Hartley) Act, which specifically prohibited unfair union practices, such as jurisdictional and sympathy strikes and featherbedding. The Taft-Hartley Act also placed restrictions on union administration, contract contents, and health and safety strikes. After the passage of the Taft-Hartley Act reeled in union power, however, two court cases came on its heels that would expand unions' bargaining scope to employer-provided benefits.

Economic constraints and accompanying inflationary pressures of World War II forged changes in compensation practices of many employers. The War Labor Board, charged with maintaining price stability, placed restrictions on cash-wage increases employers could offer. With a short supply of labor to produce a growing demand for war products,[3] employers began offering nonwage benefits, which included insurance, pension plans, and holiday and vacation leave, as a means to attract and retain workers. The War Labor Board encouraged these offerings, considering them as fringe benefits with little inflationary potential.

However, once these benefits made their way into practice, workers began to regard them as mainstay components of compensation. The cry 30 years earlier by Gompers' that mandating benefits "weakens independence of spirit" had dissipated. In the post-war years, unions would not only fight for wage increases but also benefits. The courts would prove instrumental in this fight. In the 1948 case of *Inland Steel v. NLRB*, the court interpreted the right to bargain for working conditions, protected under the Wagner Act, to include the right to bargain for retirement benefits. In the 1949 case of *W. W. Cross and Co. v. NLRB*, the court came to the same conclusion for health insurance. These benefits would become mainstay compensation components of union contracts and would slowly emerged as part of nonunion compensation as well. (The growth of employer provided benefits is described later in this section.)

### Setting standards

Other important labor legislation was also passed in the wake of the Great Depression. The Davis-Bacon Act of 1931 and the Walsh-Healey Act of 1936, to name two, established wage standards for workers employed by contractors or subcontractors on public construction or in the provision of materials and supplies to the Federal Government. (Before these laws, formal wage standards of any kind had been uncommon.)

The passage of the Fair Labor Standards Act (FLSA) of 1938, which remains today one of the most significant acts regarding labor standards, set working-condition requirement for most workers engaged in or producing goods for interstate commerce. The FSLA set minimum wages, maximum hours, and overtime stand-ards that employers had to follow. Additionally, this act set national rules for child labor, at a critical time in history. (Child labor legislation had been evolving for some time in State houses, but falling real wages during the Great Depression precipitated a national restriction on the use of child labor.)

The FSLA had a direct effect on compensation, as it not only set minimum wage standards, but also established provisions for overtime hours and pay that would become part of wage benefits for all nonexempt workers. In conjunction with the SSA, the FSLA wove an additional thread into the national social security net by legislatively setting a living wage and decent hours for American workers.

In 1949, the FLSA was amended to directly prohibit child labor; in 1958, the Welfare and Pension Disclosure Act was passed, setting reporting requirements for administrators of health insurance, pensions, and supplementary plans; and, in 1959, the Labor-Management Reporting Act was passed, providing additional protection for the rights of union members.

During the 1960s and 1970s, laws protecting against discrimination and laws protecting the health and safety of workers were passed. Still other labor-related legislation dealt with taxation and standards for administering pension plans. Throughout these years, families were undergoing significant economic changes. Women, particularly married women with children, were a growing presence in the workforce. Between 1960 and 1995, the number of married working mothers grew from 6.6 million to 18 million. The number of single working mothers also took on its own presence, growing from 0.6 million in 1980 to 2.1 million in 1995.[4]

While these changes in families' work choices were occurring, industries were shifting from goods-producing to service-producing, which led to a disproportional growth in white-collar occupations—occupations where unionization was not very common. As a result, changes in pay methods and working conditions would not be ushered in by unions, as they were at mid-century. Instead, legislative initiatives provided the framework for new workplace and compensation practices.

The compositional change in families brought a desire for flexibility: flexibility in leave for family care and flexibility in the assortment of benefits employers provided. For the former, legislation helped with the passage of the Pregnancy Discrimination Act in 1978 and the Family and Medical Leave Act of 1993. For the latter, employers have begun to offer flexible benefit plans, in an attempt to tailor benefits offered to employees.

With a rising number of two-earner families, conflicts in benefits received by families began to emerge. Perhaps the most important was double health insurance coverage. In terms of hourly costs, health insurance is the most expensive voluntary benefit employers offer. Thus, it is economically prudent not to have employer expenditures dispersed on double coverage. This—among other motivations—brought about *flexible benefit* packages, or *cafeteria plans*, that first emerged in the 1970s. Flexible benefit plans are arrangements in which employees are given an allotment of benefit costs to tailor individual benefit packages, by selecting only those benefits that are most valuable to specific needs. Although flexible benefit plans still are quite limited, they are growing in popularity. In 1986, only 2 percent of workers employed in medium and large private establishments were eligible to participate in a flexible benefit plan; but, by 1997, it had grown to 13 percent.

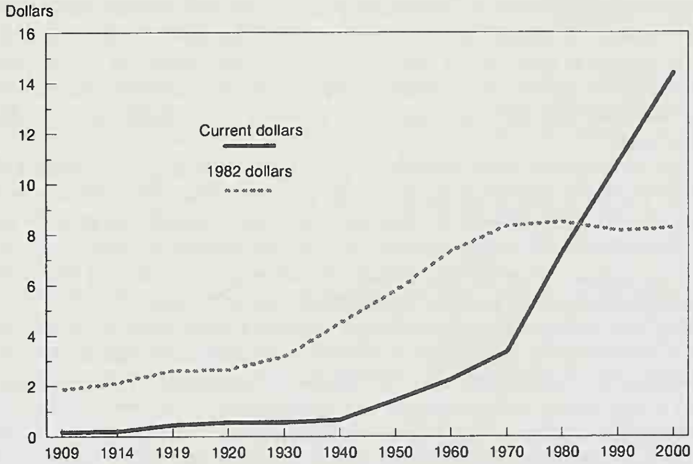
## Measuring Real Earnings over the Long Term

The evolution of the average hourly earnings of production workers in manufacturing—adjusted to reflect changes in the purchasing power of the dollar—might tempt one to announce that the *real wage of factory workers* quadrupled between 1909 and 1999.

There are, however, significant statistical issues that undermine confidence in that statement. First, the equivalence of the concepts of *earnings*, *wages*, and *compensation* has eroded tremendously, as this chapter documents in some detail. Second, there have been changes in the sheer technical quality of estimates of both earnings and prices, as this section documents briefly. Third, and most significantly, there exists great difficulty in making valid comparisons over long spans of time of the cost of living or its inverse—the purchasing power of cash earnings.

The average hourly earnings of production workers in manufacturing is one of the longest running series in the Bureau of Labor Statistics (BLS) repertoire. Data on earnings of factory workers were first published regularly starting in the January 1916 edition of the *Monthly Labor Review*. Additionally, similar data are available from BLS as far back as 1909 in less regular form, and economic historians have constructed estimates for years prior to that.

Chart 2-1. **Average hourly earnings of production workers in manufacturing, 1909-2000**



Naturally, there have been numerous efforts to improve the quality of the payroll survey estimates over the years. For example, BLS Bulletin 610, *Revised Indexes of Factory Employment and Pay Rolls 1919 to 1933*, was the Bureau's first essay at benchmarking survey estimates to adjust for any pronounced bias when compared with trends in censuses of employment.

In the late forties, BLS addressed some methodological problems, including making the estimates of average weekly earnings and average hourly earnings consistent with each other, using the *link relative* technique to eliminate inconsistencies due to changing samples, and using aggregate hours—instead of employment—as the weight for aggregation of average hourly earnings to higher levels of industry aggregation.

In the early 1960s, all industries became classified on the Standard Industrial Classification (SIC) basis, when nonmanufacturing was converted to the SIC system from the Social Security Board classifications. In 1961, work began to design comprehensively a sample stratified by *size* of establishment, instead of sampling only establishments with employment over a certain industry-specific number. And in 1966, the *link and taper* method became routinely used for the monthly calculation of hours and earnings.

In 1970, for the first time, the Current Employment Statistics (CES) program began publishing seasonally adjusted estimates of average hourly earnings, using the *BLS Seasonal Factor Method*. Seasonal factoring, or adjustment, permits the more accurate interpretation of intra-year trends in economic time series by *smoothing* regular month-to-month fluctuations caused by weather, holidays, and other factors. In the 1980s, the CES program continued to expand the survey sample and made additional changes in seasonal adjustment procedures and industry coding, as well as other technical changes. The number of establishments surveyed in the service sector doubled between 1979 and1989, although sampling as a percent of the service-producing universe remained unchanged.

Starting in 1995, changes in sampling techniques were developed to achieve a genuinely random sample. Besides creating a new sampling design, the CES program made modifications in the formulas for estimation. For hourly earnings, the link technique was kept, but weights were assigned to each sampled unit. (The use of weights replaced the use of size-based strata.) By the end of the decade, however, the new sample and new formulas were in use only in the wholesale trade division; changes are to extend to the remaining divisions over the next few years.

As a result of these and other program improvements, the degree to which Current Employment Statistics estimates needed to be adjusted to benchmarks was reduced substantially. Bulletin 610, published in 1934, reported a cumulative bias of about 11 percent between 1923 and 1929. Today's status is outlined in the monthly Employment Situation news release: "Over the past decade, the benchmark revision for total nonfarm employment has averaged 0.3 percent, ranging from zero to 0.7 percent."

Calculating real, inflation-adjusted, earnings requires a price index to deflate current dollars to a constant level of buying power. The most commonly used index for this purpose is the Consumer Price Index (CPI). Like the measure of unadjusted, or *nominal*, earnings, the CPI has a long history of development and improvement.

Cost-of-living and retail price statistics are mentioned as early in the Bureau's history as 1891, and the first weighted retail price index was published in 1903. Since those early days, there is virtually no aspect of price index statistics that has not been improved. The number of monthly prices collected has grown from about 5,000 for the *30 principal items of food* in the 1903 publication to about 70,000 that are grouped into 305 categories called *entry level items*. Additionally, the number of outlets sampled has grown from 800 for the earliest years of the index to about 30,000 retail and service establishments; and about 27,000 landlords and tenants provide data on housing units. Also, the number of localities for which data are collected has risen from 32 to 87.

Perhaps the most consistent element of the consumer price program's scope has been its framework of a family's living costs. The definition of the index family for the CPI used in the calculation of real wages, the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) has been fairly stable. In the earliest reports, the family was composed of two or more persons with a chief earner—either a wage earner or an earner working at a relatively low salary. The restriction to wage-earner families continues; but, in 1964, single-person families were introduced for the first time.

Another consistent characteristic of the Consumer Price Index program has been technical improvement. Starting in 1940, the Bureau of Labor Statistics conducted a full-scale revision of the Consumer Price Index, to take into account new population patterns, changes in the composition of consumer expenditures, and improvements in survey concepts and methods. Five subsequent revisions have ensued, with the latest one introduced in 1998. It is important, however, to recognize that many improvements in the CPI have been implemented outside the formal revision process. Some of the most important of these inter-revision changes were the adoption, in 1967, of the quality adjustment concept in handling automobile model changeovers; the shift in 1985 (1983 for the CPI for All Urban Consumers, or CPI-U) to a flow-of-services model for pricing owner-occupied housing; and the implementation of hedonic or regression-based quality adjustments, starting with apparel prices in 1991. Perhaps most significant of the more modern improvements has been the adoption of a new functional form, the geometric mean, to calculate the average of prices of items within most CPI product categories. One effect of using geometric means is that the formula now adjusts to some degree for changes in consumption that one might assume would result from changes in the relative prices of items in the CPI market basket.

As a result of this and the other improvements, the CPI-W today is a better measure of living costs than previously, and is the best statistic to use to deflate one month's or one year's earnings' estimates into dollars comparable with the dollars of adjacent (or at least close-by) months or years. But even with nearly perfect earnings' estimates and price indexes, is it legitimate to make a comparison of the real earnings of 1909 with real earnings of 1999?

Simply doing the arithmetic results in real earnings of $2.03 constant 1982 dollars in 1909 and $8.26 constant 1982 dollars in 1999. A more complex question is whether or not we can meaningfully compare—over a span of nearly a century—the standard of living purchased by even the most precisely measured nominal dollar deflated by even the most carefully constructed price index. The main issue is the vastly different character of actual consumption between widely separated points in time. For example, purchasing an Internet connection, at any price, would have been impossible, in 1909; and something like a buggy whip has gone from a common tradesman's tool to an item of esoteric taste.

To combine the changing definition of the average consumption bundle, with changing notions of an adequate budget, with a changing level and composition of compensation means that there has been a increase in the measured real cost of a *moderate* standard of living. One avenue to explore toward an explanation is the possibility of using labor hours as the metric, rather than real dollars.

Doing that arithmetic shows that a *fair* level of living for a typical cotton mill worker could be earned in 1909, with about 3,750 hours of labor; and that a median family budget for 1998 could be obtained in exchange for about 2,625 hours of work. Thus, if one can assume that the "fair" level of living in 1909 is no better than the median family budget of 1998, then one could conclude that workers in 1998 were better off. While this may show some improvement across the 90-year span, most of the old questions about comparability remain; and, in fact, new ones are raised. For one thing, the nature of work has changed, and increasing incomes have led to an increased taste for leisure time.

In the end, it is generally true that price indexes and measures of purchasing power are accurate only over short time horizons within which tastes, technologies, and economic structures are relatively homogeneous. Comparisons over longer periods, the interest they generate notwithstanding, will always be subject to noncomparability and misinterpretation, because the assumptions that underlie these comparisons—constancy of tastes and technology are violated.

| Year | Type of family budget | Level of living | Budget amount | |
|---|---|---|---|---|
| | | | Current $ | 2000 dollars[1] |
| 1908-09 | Cotton mill worker[2] (5 person) | Fair | $ 713 | $ 12,402[3] |
| 1919 | DC federal worker[2] (5 person) | Health and decency | 2,142 | 21,321 |
| 1947 | BLS family budget[4] (5 person) | Modest but adequate | 3,329 | 25,706 |
| 1947 | BLS family budget[4] (4 person) | Modest but adequate | 2,904 | 22,425 |
| 1951 | BLS family budget[5] " | Modest but adequate | 3,750 | 24,837 |
| 1959 | BLS family budget[5] " | Modest but adequate | 5,180 | 30,653 |
| 1966 | BLS family budget[5] " | Moderate/Intermediate | 7,329 | 38,952 |
| 1973 | BLS family budget[6] " | Intermediate | 9,761 | 37,857 |
| 1979 | BLS family budget[7] " | Intermediate | 15,353 | 36,416 |
| 1979 | Revised Watts budget[7] " | Median (PFS) | 16,129 | 38,256 |
| 1981 | BLS family budget[8] " | Intermediate | 18,240 | 34,554 |
| 1984 | Revised budget[9] " | Median (PFS) | 20,531 | 34,027 |
| 1989 | Revised budget[10] " | Median (PFS) | 27,143 | 37,694 |
| 1994 | Revised budget[10] " | Median (PFS) | 31,817 | 36,970 |
| 1998 | Revised budget[10] " | Median (PFS) | 36,528 | 38,590 |

[1] Adjusted using the Consumer Price Index for All Urban Consumers (CPI-U), 1982-84 =100.

[2] Adjusted using Consumer Price Index for All Urban Consumers for 1913 and budget data for 1908-09.

[3] Bureau of Labor Statistics, *How American Buying Habits Change* (1959).

[4] Bureau of Labor Statistics, *Workers' Budgets in the United States: City Families and Single Persons*, Bulletin 927 (1947); 4-person budget for median city (St. Louis); 5-person budget calculated using equivalence scale.

[5] U.S. Department of Labor, Bureau of Labor Statistics, *City Worker's Family Budget for a Moderate Living Standard*, Bulletin 1570-1 (1966).

[6] Brackett, Jean, "Urban family budgets updated to autumn 1973," *Monthly Labor Review*, August 1974.

[7] Expert Committee on Family Budget Revisions "New American Family Budget Standards," IRP working paper (1980).

[8] "Family Budgets," *Monthly Labor Review*, July 1981.

[9] Rogers, J. "Estimating Family Budget Standards," unpublished BLS manuscript, 1987.

[10] Calculations using 1989, 1994, and 1998 Consumer Expenditure Survey data and share of total budget spent on family consumption items.

Source: Johnson, David S., John M. Rogers, and Lucilla Tan, "A century of family budgets in the United States," *Monthly Labor Review*, May 2001.

## Composition of pay

In early 2000, the average hourly cost of compensation for employers was $21.16, of which 82 percent consisted of wage payments that included paid leave and supplemental pay.[5] The remaining 18 percent comprised hourly costs for non-wage supplements, such as health and life insurance, retirement and savings, and other legally required benefits. As presented earlier, few workers at the turn of the 20th century received any form of nonwage benefits; and, in fact, these nonwage supplements to compensation were coined fringe benefits for most of the century. The word *fringe* connoted that these components of pay were of little substance to the overall pay structure of workers. With nonwage benefits now accounting for nearly one-fifth of average compensation, they are anything but *fringe.*

Measuring changes in components of pay across the 20th century is made difficult by the lack of a comprehensive and consistent series of compensation data. Compensation studies undertaken through most of the century have measured components of pay through the years targeted specific workers, such as mill and manufacturing workers, or worker categories, such as union or white-collar workers. Each of these compensation studies had specific purposes, frequently responding to labor issues of the day.

However, the National Income and Product Accounts (NIPA) of the Bureau of Economic Analysis provided a consistent source of compensation data for the economy as a whole for the better part of the century. The NIPA provides aggregate estimates of both wages and salaries, as well as supplements to wages and salaries. These supplements, in large part, are measures of non-wage benefits, including employer contributions for legally required benefits—such as Social Security and unemployment insurance—and voluntary benefits, such as health and life insurance, private pension plans, and profit-sharing plans. Supplements increased sharply through most of the decades of the 20th century, increasing from 1.4 percent in 1929 (the earliest year in which these data are available) to 17.5 percent by the close of the century.[6]

The remaining sections of this chapter discuss the major economic, political, and demographic influences on compensation during the 20th century. These sections track the growth of new forms and types of compensation. Additionally, these sections track the changes in the Bureau of Labor Statistics compensation studies and the reasons for these changes. The final section explores *future* trends in employee compensation and the data collection challenges these trends might pose.

## Pre-World War I reform and economic volatility

At the turn of the 20th century, the United States was about to enter a new era. Most areas of the country had become populated, the frontier had disappeared, and the country was about to become a world power. The United States had survived civil and foreign wars, suffered through recessions and panics, and had seen the formation of a business economy that would eventually produce the highest standard of living on Earth.

A significant feature of the early 1900s was growth in the average size of establishments.[7] This size increase was made possible by, among other factors, the heightened availability of electricity and growth in the size of markets for goods. Larger establishment size tended to provide economies of scale and reduce competition.

Another notable feature of the early 1900s was volatility in business conditions. There were recessions or depressions in 1902-04, 1907-08, and 1910-12, due, in part, to the absence of a mechanism to limit the effect of runs on banks or to control the money supply.[8]

The Federal Government played a pivotal role during this period, helping to usher in a period of reform. The watch words of the day were elimination of corporate abuse, trustbusting, tariff reduction, banking reform, protection of natural resources, creating new sources of government revenues, and improving workers' living and working conditions. Several new laws were enacted: The Hepburn Act of 1906 provided the Interstate Commerce Commission authority to regulate railroads; a pure-food law in 1906 forbade the use of "deleterious drug, chemical or preservative"; the 16th Amendment to the Constitution (1913) authorized the Federal income tax; and the Clayton Antitrust Act of 1914 limited the use of injunctions in labor disputes and provided that picketing and certain other union activities were not to be considered unlawful.

Although some improvements had been made, working conditions were harsh at the beginning of the 20th century. During these early years of the century, pay was low, workweeks were long, business conditions were volatile, competition for jobs (due, in part, to immigration) was intense, and employees were unquestionably subject to the doctrine of employment-at-will.[9] Also, there was little compensation beyond the paycheck. For example, retirement income depended almost exclusively on what one saved during one's working life,[10] and there was no government or employer aid if workers suffered job-related injuries or lost their jobs. The first major social insurance program in the United States—workers' compensation, which compensates workers for injury on the job through exclusive State insurance funds—was adopted first in Washington and Ohio in 1911.[11]

Job insecurity, low pay, and poor working conditions led to labor unrest, as indicated by the growth in union membership and by several major strikes. Trade union membership in the United States[12] rose in the following manner in the early 20th century:

| Year | Total membership (thousands) |
|---|---|
| 1900 | 791 |
| 1905 | 1,918 |
| 1909 | 2,116 |
| 1915 | 2,560 |

In 1902, miners conducted a 5-month strike against anthracite coal mine operators. Other noteworthy strikes during this period occurred in the textile, iron, railroad, clothing, and mining industries.

***Increased Role of the Bureau of Labor (predecessor of the Bureau of Labor Statistics).*** In such an atmosphere, there was increased demand for "regular and adequate statistical data relating to wages." Around 1890, the Commissioner of the Federal Bureau of Labor (later the Commissioner of the Bureau of Labor Statistics) began to supervise the collection of average rates of pay by occupation, industry, and region and for selected occupations, by city and State. These data were presented in an annual report or in the Labor Bureau's bimonthly bulletin.

During the winter of 1900-01, the Bureau expanded its data-collecting program, launching a study of occupational wages by industry, collecting the average hourly earnings in major occupations in the leading manufacturing and mechanical (such as construction) industries. Published in 1905, as the Commissioner's *Nineteenth Annual Report*, the volume provided data for 1890 to 1903, covering 519 important and distinctive occupations in 3,475 establishments in 67 manufacturing and mechanical industries. These data included actual and relative wages and hours by occupation, relative wages by industry, and relative wages and hours for all industries covered. The report described in detail how data were collected and tabulated. It expressed confidence in the quality of the data, because "...all the field work for this report was carefully done by experienced agents of the Bureau.[13]

After 1907, there was a 4-year lull in the Labor Bureau's wage survey program, due to pressure of other work, such as a special study of wages and working conditions of women and children. A 1912 wage study of cotton goods manufacturing and finishing industries added job descriptions to help ensure that identical occupations were surveyed over time. Also in 1912, the Labor Bureau began studies of union wage scales and hours of work in construction, newspaper printing, and several other industries, with data carried back to 1907.

In 1911-12, the Labor Bureau published a four-volume study of the "condition of employment" in the iron and steel industry, at the request of the U.S. Senate. Agents of the Bureau of Labor visited more than 100 plants throughout the United States, to survey the wages and working conditions in the industry. In 1911, the Labor Bureau published average hourly earnings for *productive* occupations, such as laborers, melters, hammermen, heaters, cinder men, and steel pourers. In 1912, the Labor Bureau reported on the trend of wages from 1900-10 for all classes of laborers working in blast furnaces, Bessemer converters, open-hearth furnaces, blooming mills, bar mills, and rod mills; the data provided the percent of workers in various wage rate ranges at each of these six type of facilities. The report also included hourly rates for common laborers.

Meanwhile, because of the "marked growth in the application of insurance," the *Twenty Third Annual Report of the Commissioner of Labor* (1908) was devoted to a benefit study, "Workmen's Insurance and Benefit Funds in the United States." This study reported on current workmen's insurance, which protected workers against sickness, accident, death, old age, and other adversity. It involved three general types of insurance funds: Those maintained by or as adjuncts to labor organizations; those found in a common place of employment (usually limited to the employees of a particular establishment); and those maintained by industrial benefit societies, without regard to common employment or affiliation with any particular labor organization. The study analyzed local labor organization benefit funds, railroad relief funds, establishment benefit funds, hospital funds, miscellaneous funds, industrial benefit societies, and State and savings banks' insurance:

> The investigation discloses that nearly all of these funds attempt to accomplish no more than to relieve immediate necessities. The two principal classes of benefits are for death and for temporary disability. The benefit paid on the death of a member usually is no more than enough to pay funeral expenses, although some few societies provide a much more substantial sum.
>
> The temporary disability benefits are generally designed to cover partially the loss of earnings occasioned by an illness of ordinary length or by an accident. In no case is it the purpose to pay a benefit greater than the wages lost. Generally a benefit is not paid for an illness of less than one week; but for loss occasioned by accident, especially if occurring while on duty, benefit is usually paid from the date of injury. Temporary benefits...are limited to a definite period, varying from a few weeks to several months.[14]

## World War I and prosperity

The first major attempt at government control of the economy occurred during World War I, as the Nation quickly shifted more than 20 percent of national production to wartime needs.[15] During these hostilities, the War Industries Board determined industrial priorities, fixed prices, and converted plants to meet Federal Government needs. Many government functions that would be taken for granted a half-century later had their origins at this time.[16]

The War Labor Board, established to settle industrial disputes, became the model for a national system of labor-management relations in the 1930s. For the emergency period during the War, union representatives on that board won the right of workers to join unions and not be discharged for union activity.[17] The U.S. Housing Corporation built housing for defense personnel, beginning the Federal involvement in the Nation's housing market. The U.S. Railroad Commission took control of the Nation's railroads. The Food Administration and Fuel Administration coordinated food and fuel distributions, respectively.[18]

Trade union membership almost doubled from 1915 to 1920—years of war and postwar economic boom. During this time, the Federal Government, for the first time, treated the labor movement as a legitimate representative group.[19] From a high point of 5 million members in 1920, however, there was an almost continual decline in union membership until the bottom was reached in 1933.[20] After major strikes in 1921-23 (including an unsuccessful attempt to organize the steel industry), trade unions were unable to exercise direct pressure on employers for almost a decade, until the passage of the Wagner Act in 1935, which promoted unionization and collective bargaining.[21]

As had been the case earlier, the compensation studies conducted by the Bureau of Labor Statistics during World War I were authorized by Congress, to address specific needs. The War Industries Board had been created to increase production, mobilize the labor force, maintain peaceful labor-management relations, and stabilize prices and wages. At this time, the Bureau worked closely with the War Board's Central Bureau of Planning and Statistics.[22] In addition, wartime demands from various other agencies for information on wages and hours, strikes and lockouts, and labor placed additional requirements on the Bureau.

Not until the war was nearly over in late 1918, however, was funding allocated for the Bureau to undertake wage surveys for use in the solution of labor problems in a number of industries and to provide a record of industrial conditions at the height of the war effort.[23]

Continuing to use procedures begun in 1913, agents specialized in certain industries and became "...more familiar with the nature of the work in the various occupations."[24] The Bureau's regular, pre-war program had included only 10 industries surveyed at 2-year intervals. In May 1920, results of wages and hours surveys during 1918 and 1919 were published for fully 780 occupations in 28 industries.[25]

In what today might be called a vision statement, the work of the BLS was outlined in 1927: "Primarily the Bureau of Labor Statistics is a fact-finding agency. Its duty as set forth in the act creating it is to 'collect information upon the subject of labor * * * and the means of promoting the material, social, intellectual, and moral prosperity' of the wage earners of this country. The function of the bureau is thus somewhat broader than is what is commonly understood by the word *statistics*. Its field of work not only covers purely statistical data, but also includes other subjects of vital human welfare, such as accident prevention, housing, labor legislation, and social insurance in all its phases."[26]

The 1920s were not always favorable for this vision, as public attitudes and policies encouraged business interests.[27] The Bureau found little opportunity to expand or improve its work during this period,[28] although it did expand coverage of industry wage studies into 20th century manufacturing industries and expanded into newly emerging compensation practices, such as bonus systems and pay for overtime, Sunday, and holidays.[29] Although surveys were confined to manual jobs and largely selected jobs in the manufacturing sector, these surveys provided a reasonably consistent body of data on both the structure and trend of wages for industrial workers.[30]

During this retrenchment period, the Bureau was able to continue one of its oldest programs, union scales of wages and hours of labor, which dated back to the late nineteenth century. Data were collected for occupations in five industries—bakeries, building trades, marble and stone trades, metal trades, and printing—for localities throughout the country. As an example, wages and hours from 1913 to 1925 in Chicago for several trades are summarized in table 1.[31]

The Bureau also undertook various studies of workmen's compensation, legal aid, and social insurance programs, often in reaction to changes in the law. For example, following the passage of amendments to the Federal retirement system in 1926, the Bureau conducted a survey of 46 State and municipal pension plans, publishing the results by 1929, along with information on public retirement systems in Canada and Europe.[32] The cost of benefits, however, was still a very small part of a worker's compensation package, accounting for less than three percent of the employer's cost for employee compensation.[33]

An early example of one of the Bureau's studies of retirement systems was data published on a retirement plan for employees of the State of New Jersey. This retirement system for these employees was created in March 1921, with contributions starting in January 1922 and pensions first being paid in July 1922. Membership was optional for current employees but mandatory for all new employees. Contributions from the State and employees were "sufficient to secure upon retirement at age 60 an annuity amounting to 1/140 of their final average compensation for each year of service rendered." For example, an employee retiring after 35 years of service would be entitled to an annuity valued at one-quarter (35 X 1/140) of the final average compensation. Retirement was optional at age 60 and compulsory at 70.

In 1926, the Bureau conducted a comprehensive study of workers' compensation. At that time, all but five States had enacted workers' compensation laws to protect workers from losses resulting from injuries on the job. Nearly all these States had passed their initial legislation by 1919 and had subsequently expanded the scope of the acts, increased the amount of benefits, and reduced the amount of time before receiving benefits.[34] Benefits in these States[35] covered fatal—as well as nonfatal—injuries and medical and surgical benefits. In most States, compensation benefits were based on a percentage of average wages, ranging from one-half of average wages in 16 States to two-thirds of average earnings in 12 States. Maximum payments ranged from $3,000 to $7,800 for death and from $3,000 to $10,000 for permanent total disability.[36]

The Bureau also conducted another survey in 1926,[37] following up on an earlier survey of the existence of "industrial establishments offering insurance to their employees under the group plan."[37] "After 1916, the amounts of group insurance being written increased very rapidly ... In the earlier study only 32 of the companies had inaugurated a group insurance plan, while in the present study 186 companies with 672,468 employees were found to have such a plan in effect."[38] "The earlier group life insurance policies provided for payment of a lump sum in case of death, the amount of the insurance usually ranging from $200 to $1,000 and frequently increasing with each year of service." In 1922-3, group accident and sickness policies were first written as added features of many group life-insurance policies and the "...contributory features became even more marked. In many establishments the employer arranged for combination group life, sickness and accident insurance, part of the premium to be paid for by the worker, while in other cases the employer paid for the life insurance and the employee paid for the sickness and accident insurance."[39] The usual minimum life insurance benefit was $500, with many plans varying by an employee's annual salary and length of service.[410] Sickness and accident insurance provided benefits for non-occupational injuries, usually "for periods of 13 weeks, 26 weeks, or occasionally 52 weeks," with benefits being paid according to salary class.[41]

## The Great Depression and the Federal role in the economy

The Great Depression, a long and severe period of economic decline, affected the United States and the entire industrialized world. The American stock market declined by nearly 90 percent from 1929 to 1932, ruining individual investors and financial institutions. Many banks and other businesses were forced into insolvency. The resultant sharp declines in consumer demand and capital investment led to greatly reduced levels of spending, production, and gross national product (GNP).

From an estimated annual rate of 3.3 percent during 1923-29, the unemployment rate rose to a peak of about 25 percent in 1933. The economy reached its trough in 1933; but although unemployment had reached its peak, economic recovery was slow, hesitant, and far from complete. As shown below, the unemployment rate was still nearly 15 percent in 1940: [43]

| *Year* | *Unemployment rate* |
|---|---|
| 1923-29 | 3.3 |
| 1930 | 8.9 |
| 1931 | 15.9 |
| 1932 | 23.6 |
| 1933 | 24.9 |
| 1934 | 21.7 |
| 1935 | 20.1 |
| 1936 | 17.0 |
| 1937 | 14.3 |
| 1938 | 19.0 |
| 1939 | 17.2 |
| 1940 | 14.6 |
| 1941 | 9.9 |
| 1942 | 4.7 |

In March 1933, Franklin D. Roosevelt was inaugurated President and initiated a series of aggressive measures, collectively known as the New Deal, in an attempt to revive the economy from the Depression. New Deal legislation brought unprecedented Federal Government involvement to the economy.

The Great Depression also resulted in the unprecedented involvement of the Federal Government in labor-management relations. The passage of the National Labor Relations Act (Wagner Act) of 1935 guaranteed the rights of workers to join labor unions and to bargain collectively with their employers. The impact of unionization on the wages and benefits of blue-collar workers in important manufacturing industries also spilled over into non-union workerplaces and industries. Union membership rates, which had been about 1 in 8 workers in the early 1930s, doubled to more than 1 in 4 workers in 1940:

| *Year* | *Union membership rate*[44] |
|---|---|
| 1930 | 2.3 |
| 1935 | 13.8 |
| 1940 | 27.6 |

Industrial workers in the mass-production industries–steel, automobiles, rubber, and electrical equipment–were organized during this time. In 1935, eight industrial unions formed the Committee for Industrial Organization within the American Federation of Labor (AFL), which was dominated by the craft unions. Three years later the CIO split completely from the AFL and became a separate entity, the Congress of Industrial Organizations (CIO).

In addition to becoming involved in labor-management relations, the Federal Government became involved in establishing wage standards at this time. For example, the passage of the Davis-Bacon Act of 1931 created the establishment of wage standards for worker employed by contractors or subcontractors employed on construction projects financed by the Federal Government. A second piece of legislation, the Walsh-Healey Act of 1936, established a prevailing wage for workers employed by firms providing materials and supplies to the Federal Government. Finally, the Fair Labor Standards Act of 1938 established a minimum wage ($.25 per hour)[46] for most workers involved in producing goods for interstate commerce.

The Great Depression also brought a different approach to viewing economic security. Americans became aware that individuals were not always able to provide for their own security in a modern industrial society. Before 1934, workers' compensation was typically the only help available to workers.[47] Workers had no protection against loss of income for any cause other than industrial accident, except their own savings, organized charity, and local relief agencies.[48] Surprisingly, there was little support for social insurance programs other than workers' compensation before 1930. In 1931, for instance, a national AFL convention refused to endorse unemployment insurance legislation.[49]

The roots of the New Deal had been planted during early debates about compulsory State insurance and workers' compensation.[50] But it wasn't until the devastating economic disaster of the 1930s that most Americans became convinced of the necessity of a permanent national plan for coping with severe losses in income.[51] Subsequently, Congress passed the Social Security Act of 1935, which provided two social insurance programs–a Federal system of old-age benefits for retired workers and a Federal-State system of unemployment insurance. The Social Security Act also established a series of Federal grants to the States for additional old-age assistance, aid to the blind, and aid to dependent children.[52]

In addition to providing compensation for lost income, the passage of the Social Security Act and the Wagner Act in 1935 signaled the beginning of the concept of compensation as more than just traditional straight-time pay for time worked. Unions began to deviate significantly beyond the traditional scope of collective bargaining–wages, hours, and working conditions–and began to negotiate compensation packages that would give workers more and better welfare plans than were provided by legally required plans.[53] Consequently, supplements to wage and salaries, including legally required benefits and private health and welfare plans, although still accounting for less than that 4 percent of compensation costs in 1939, had more than doubled in value in the previous 10 years.

Between 1932 and the end of the decade, the Bureau's wage survey activity was primarily geared to the information needs of the new Federal agencies created by the New Deal; and the Bureau expanded, with a doubling of staff and budget between 1934 and 1941.[55] In place of the periodic study of major industries, the Bureau studies of minimum wage and maximum hour provisions were needed for industries to meet the "codes of fair competition" required by the National Industrial Recovery Act (NIRA) of 1933. Major comprehensive studies, including information on working conditions—as well as wages—covered a diverse set of industries and occupations.[56] Several studies were also undertaken in cooperation with the Works Progress Administration (WPA), as well as surveys done in connection with the Walsh-Healey Act that covered work performed by Federal government contractors.[57]

Because of the need for data for minimum wage determinations under the Fair Labor Stanards Act of 1938, which initially provided for a minimum wage by industry, the Bureau conducted about 45 industry wage surveys during 1938 and 1939.[58] Most of these studies provided data on the distribution of workers in low-wage industries by straight-time hourly earnings, without occupational detail.[59]

One example of the studies conducted by BLS for the NIRA was the survey in March 1935 of the manufacture of cigarettes and tobacco products industry.[60] This survey covered approximately 38,000 workers in 48 plants. A summary of the article concerning the survey found, "Most of the plants used both piece- and time-rate methods of wage payments. A noteworthy improvement in weekly hours and payment of higher rates for overtime was found in 1935, as compared with the situation existing prior to the National

Industrial Recovery Act."[61] Paid holidays and vacations were generally limited to salaried workers, and pay for lost time due to sickness was rarely provided by a formal plan. Insurance benefits were limited. "A number of the companies, especially the large ones, had welfare programs covering one or more of such measures as medical care, group insurance of various kinds, thrift clubs, and lunch rooms. Approximately half of the employees were, by such programs, provided access to medical services beyond first-aid attention."[62]

Another example is a survey conducted with the WPA of the building construction industry in the fall of 1936 for information on prevailing wage rates. Information was gathered from over 6,000 contractors involved in more than 13,000 projects in 105 cities across the country.[63] Average earnings for the 186,145 workers were $.918 per hour. Earnings for electricians, bricklayers, and structural ironworkers averaged more than $1.30 per hour. Laborers earned $.516 per hour. Earnings for union workers were significantly higher in comparable trades than for their nonunion counterparts. For example, union electricians earned nearly 60 percent more per hour than their nonunion counterparts.[64]

One of the rapidly growing benefits during the 1930s was paid vacations to employees. In 1937, a BLS survey of 90,000 firms found that approximately 95 percent of the 700,000 salaried workers received annual vacations with pay, compared with 36.7 percent of the 9.5 million wage earners.[65]

For salaried workers, most paid vacation plans were initiated between 1920 and 1930. Vacations were practically all for either a 1- or 2-week period, with 2 weeks reported for 57 percent and 1-week plans for 37 percent of salaried workers.[66] The usual length of service to be eligible for a vacation was 1 year, reported for 80 percent of the plans. For graduated plans, the 1-week minimum and 2-week maximum vacation was almost universal.[67]

For wage earners, survey results indicated approximately 70 percent of plants with a paid vacation plan for wage earners said they initiated it during the 1930-37 period; and about 40 percent gave vacations for the first time in 1937.[68] Wage earners were typically eligible for a vacation after 1 year of service, although 40 percent required 2 years'; and 20 percent required 5 years' or more service.[69]

### World War II and the transition to a peacetime economy

Following the bombing of Pearl Harbor in December 1941 and the ensuing entry of the United States into World War II, the Federal Government mobilized its resources and the country's industrial might. On January 6, 1942, President Roosevelt announced ambitious wartime production goals. In response, all the country's economic sectors came under new or increased Government controls.

The Federal Government created a number of agencies, such as the War Production Board (1942), the Office of War Mobilization (1943), and the Office of Price Administration (1942), to increase total production, reallocate production to military uses, and control wages and prices. Increases in military output were obtained, in part, by diverting resources from current uses, particularly for the production of consumer goods. Manufacture of consumer items—such as automobiles, refrigerators, and housing materials—was forbidden.

Controlling output proved easier than controlling wages. Inflationary pressures were created by the shortages of both goods and labor that developed during World War II; subsequently, the Consumer Price Index (CPI) increased by more than 35 percent at this time. Several attempts were made to create an effective organization to control wages and limit work stoppages. In 1941, President Roosevelt created, by executive order, the National Defense Mediation Board. The Board had jurisdiction over cases referred to it by the Secretary of Labor and was given authority to settle disputes by conciliation, voluntary arbitration, and public recommendations. However, the Board ceased to be useful when the CIO members withdrew in November 1941.

The National War Labor Board was created by President Roosevelt, by executive order on January 12, 1942. The Board was established to determine procedures for settling disputes that might affect war production. The Board had the options of offering mediation, voluntary arbitration, and compulsory arbitration to try to resolve controversies but had no power to enforce its decisions. It was also authorized to approve all wage increases, where the total annual remuneration was below $5,000. The Board quickly adopted the so-called *Little Steel* formula for wartime wage changes, i.e., based on a 15-percent rise in living costs from

January 1, 1941, to May 1, 1942. In September 1942, the President was given the authority to stabilize wages and salaries, based on September 15, 1942 levels.

As a result of wage restrictions, employ-ers who needed to attract labor resorted to providing a growing range of fringe benefits, such as pensions, medical insurance, and paid holidays and vacations. These benefits were considered non-inflationary, as they were *not* paid in cash and, thus, did not violate the wage ceiling. Additionally, payments for overtime afforded extra income to workers, without violating the limits on hourly wage payments. During the late 1940s, fringe benefits became more common as part of settlements reached in collective bargaining.

On June 25, 1943, Congress passed the War Labor Disputes (Smith-Connally) Act that authorized the President to take over plants needed for the war effort or in which war production had ceased because of a labor dispute. These sanctions were effective against management but were not as effective against labor. Although strikes were prohibited during the War, they did occur.

| Year | Number of | | |
|---|---|---|---|
| | Work stoppages | Days of idleness (thousands) | Union members (thousands) |
| 1940 ....... | 2,508 | 6,700 | 8,717 |
| 1941 ....... | 4,288 | 23,000 | 10,201 |
| 1942 ....... | 2,968 | 4,180 | 10,380 |
| 1943 ....... | 3,752 | 13,500 | 10,213 |
| 1944 ....... | 4,956 | 8,720 | 14,146 |
| 1945 ....... | 4,750 | 38,000 | 14,322 |
| 1946 ....... | 4,985 | 16,000 | 14,395 |
| 1947 ....... | 3,695 | 34,600 | 14,787 |
| 1948 ....... | 3,419 | 34,100 | 14,319 |
| 1949 ....... | 3,606 | 50,500 | 14,282 |

Despite efforts of the National War Labor Board, the shortage of labor during World War II caused sharp increases in wages. Average hourly earnings of production and nonsupervisory workers in manufacturing more the doubled between 1940 and 1949, with the largest increases during the war years, 1940-44. Hours worked also rose during the War, with average weekly hours for production and nonsupervisory workers rising from 38.1 in 1940 to a high of 45.2 in 1944. After the War, hours worked declined to 39.1 in 1949, slightly above the average for 1940.

After World War II, the Federal Government continued to directly affect the welfare and economic conditions of the American workforce. In 1946, Congress passed the Employment Act, which committed the Federal government to take all practical measures to promote maximum employment, production, and purchasing power. In 1949, Congress amended the Fair Labor Standards Act of 1938 to directly prohibit child labor for the first time. Additionally, two Supreme Court cases (*Inland Steel v. United Steelworkers of America* and *W.W. Cross & Co. v. N.L.R.B.*) issued after the war, in effect, required employers to bargain over retirement and health insurance plans.

Meanwhile, the transition to a peacetime economy was complicated by a number of problems, including providing economic opportunity for both returning servicemen and the current workforce. One priority was to assist returning servicemen in getting housing and education; thus, the GI Bill, for example, guaranteed loans for housing and education assistance. Another priority was to maintain industrial peace while transitioning from a wartime economy to a peacetime economy. This was difficult; labor unrest ensued, because of pent up frustration and job losses.

During the immediate postwar period, consumer goods, which were not available during the War, became in great demand. People had worked steadily during the war, often at overtime rates, and had money to spend. Demand for consumer items such as automobiles was high, so manufacturers had trouble filling orders. At the same time, union members, whose wages had been restrained during the war, demanded increases in the immediate postwar period. The result was a wave of strikes precisely when the public was anxious to see more consumer goods in stores and showrooms.

Congress reacted to the wave of strikes in 1946-47 by passing, the Labor-Management Relations (Taft-Hartley) Act in 1947. This act was seen by its sponsors as a way to redress the balance between labor and management that had been altered by the Wagner Act. Among its major provisions, the Taft-Hartley Act authorized Presidential injunctions against strikes, if the national interest was involved; banned secondary boycotts and the closed shop; and allowed States to pass *right-to-work* laws.

The coming of World War II changed the statistical needs of government, and BLS responded by changing the focus of its programs.[70] A cut in funding in 1947 also forced the Bureau to reexamine its wage program.

Prior to the War, the primary use of industry wage surveys was to monitor low-wage industries. Data from these surveys were used to determine minimum and prevailing wages required by such laws as the National Industrial Recovery Act of 1933, the Walsh-Healy Act of 1936, and the Fair Labor Standards Act of 1938. After the beginning of World War II, the needs of Federal Government statistical users had shifted to the settlement of labor disputes and stabilization of pay rates. The types of industries surveyed shifted from low-wage consumer goods industries to heavy manufacturing industries vital to the War effort. Among the industries surveyed during this period were shipbuilding; aircraft; rubber; nonelectrical machinery; and the mining, smelting, and refining of nonferrous metals. The National War Labor Board became the most important user of wage surveys. The Bureau provided data on wage rates and straight-time earnings by occupation, industry, and area, as well as a general wage rate index, to measure the effectiveness of the wage stabilization program. The Board used these data for decisions on claims for wage increases on inequity grounds and for the settlement of disputes.

Because of the importance of organized labor in the national economy, the Bureau, in 1948, first published its monthly *Current Wage Developments* (*CWD*) reports, and its wage chronology series.[71] The *CWD* reported on the wage adjustments that occurred in collective bargaining situations. Besides identifying the company, union, and location of the bargaining unit, the report listed the amount of the adjustment; the effective date of the adjustment; the number of workers covered by the adjustment; and other related terms, such as information on vacations, paid holidays, and company payments to health and welfare funds. Wage chronologies were a series of reports on the negotiated changes in wages and benefits for individual, key bargaining situations, such as General Motors, United States Steel, The Boeing Company, and the bituminous coal mine operators. Although a wage chronology for any one bargaining situation was published only periodically, it would summarize the bargaining history between the company and the union, detailing the wage and benefit changes coming from the parties' various rounds of negotiations.

### The Korean War to beyond the Great Society

The 1950s and 1960s saw the Korean War, the Cold War, the race for space between the United States and the Soviet Union, the Vietnam War, the New Frontier, and the Great Society. Television became a mainstay of family entertainment, there was a movement to the suburbs, college education and home ownership became common, and the civil rights' and women's rights' movements became powerful forces in society.

The decades of the 1950s and 1960s were generally periods of relative economic prosperity, with growth in employment and real wages, although three recessions occurred (1954, 1958, and 1961). This period saw many shifts in the economy, as the service sector grew relative to manufacturing; and employment shifted among occupations, as a result of the shifts among industries. The percentage of the total number of employed persons who worked in white-collar and service occupations increased during the period, while the percentage employed in manual occupations and as farm workers declined.

Another shift was that women became a more important factor in the workforce than during the postwar years. Women represented about 29 percent of individuals in the labor force in 1950 but had grown to more than 36 percent by 1969.

Married women, in particular, remained in the labor force in record numbers. By 1969, almost 40 percent were in the labor force, up from less than 25 percent 20 years earlier. While these rates were lower than for single women, the difference in labor force participation rates for married and single woman narrowed during this period.

Unemployment was relatively stable during the 1950s and 1960s, usually between 3 and 4.5 percent. The rate did exceed 5 percent during the recession years 1954, 1958, and 1961 and during the years of recovery immediately following the downturns. Conversely, unemployment was particularly low between 1951-53 and 1966-69. These periods coincided with undeclared wars in Korea and

Vietnam and saw large increases in defense spending and significant segments of the civilian labor force drawn into military service.

During this time, Federal legislation continued to shape the American workplace: the Social Security Act was amended to include Medicare in 1965 and the FLSA was amended in 1961 and 1966 to extended coverage to millions of additional workers. In addition, the Welfare and Pension Plans Disclosure Act of 1958, the Labor-Management Reporting and Disclosure (Landrum-Griffin) Act of 1959, the Manpower Development and Training Act of 1962, the Equal Employment Act of 1963, the Civil Rights Act of 1964, and the Age Discrimination Act of 1968 were passed by Congress. (See box on labor-related legislation.)

More than 20 years of internecine labor strife ended in 1955, with the merger of the American Federation of Labor and the Congress of Industrial Organizations to become the AFL-CIO. Unions in this merged organization agreed to honor the existing agreement of other member unions and to refrain from stealing members from one another. The new organization claimed about 15 million members.

In the 1950s and 1960s, the Bureau of Labor Statistics continued to gear its compensation surveys to the informational needs of the Federal Government, including the administration of prevailing wage and minimum wage laws. There also developed during this time period, an interest in comparing Federal and non-Federal compensation. This administrative need for data would shape many of the Bureau's compensation programs throughout the remainder of the 20th century. In conjunction with the need for data to administer Federal pay programs, the Bureau began to expand its compensation studies to include fringe or supplementary benefits. These new surveys would lay the groundwork for the Bureau's future benefit studies.[72]

The Bureau continued to publish its wage chronologies and *Current Wage Developments*. As an outgrowth of the wage development program, beginning in 1954, BLS published quarterly and annual summaries of newly negotiated wage rate changes—medians and means, for the first year and over the life, of contracts for production workers in manufacturing and non-supervisory workers in service industries.

By the mid-1960s, the Bureau developed procedures for costing supplementary benefits. This enabled the publication of data for the total change in compensation for units of 10,000 workers or more; and, in 1966, the publication of such data on settlements covering 5,000 or more workers. In 1968, the Bureau developed its *effective series*—wage changes in effect from settlements, cost-of-living adjustments, and deferred wage increases.

In the early 1950s, the Bureau also began publishing salary trends for selected groups of government employees. The first report was for white-collar workers for 1939-50, followed by city public school teachers for 1925-49 and firemen and policemen for 1924-50. These studies would provide BLS with the experience and foundation for conducting future, more comprehensive white-collar pay studies.

Also in the early 1950s, the Wage Stabilization Board (WSB) once again sought to control wage increases during the Korean War. WSB budgetary support allowed BLS to conduct a large number of labor market community wage studies for use in the Board's decisions, with occupational coverage extended to jobs particular to major industries in each area surveyed. Coupled with other BLS data, these studies provided the basis for a series of analyses of inter-area differences in wage levels, occupational wage differentials, fringe benefits, union density, and wage structure.

By the end of the 1950s, in response to demands for a cross-industry survey, BLS began to expand the community wage surveys to 80 metropolitan statistical areas that had been selected to represent all such labor markets. This program expansion would allow the Bureau to make estimates of the level and distribution of wages for a large number of white-collar and manual jobs in all metropolitan areas. It also provided the basis for national estimates of scheduled hours of work, holiday and vacation provisions, the incidence of private pension and insurance plans, and collective bargaining coverage. One reason for this expansion was the Federal Government's need for national data on white-collar salaries in private industry to implement a comparative pay policy for Federal white-collar and postal employees.

In response to the enactment of the Service Contract Act (SCA) in 1965, area wage surveys were expanded in 1967 to include areas requested by the Employment Standards Administration (ESA) for their administration of the act. (The SCA requires employers to pay prevailing wages and benefits to employees performing work on Federal service contracts.)

BLS also continued to produce occupational wage studies on an industry basis but shifted the emphasis away from industry-wide surveys to surveys of major areas of industrial concentration. These annual studies covered wages and related benefits in 25 manufacturing and non-manufacturing industries.

During the 1950s, BLS conducted several wage surveys for ESA for use in the agency's appraisal of minimum wage action under the Fair Labor Standards Act, and for a basis of decisions on minimum wage policy. The studies continued into the 1960s, with minimum wage coverage being extended to several new industries, including retail trade and service industries.

The major changes in the composition of compensation that began in the 1940s forced BLS to collect and analyze supplementary wage benefits to make Bureau compensation data more meaningful. After limited studies in the early and mid-1950s, BLS began a program to measure these benefits. In 1951, for the first time, BLS captured the costs of supplementary wage benefits in a wage study in the basic iron and steel industry. Data included direct benefits, such as pay for overtime and work on holidays and late shift, pay for holidays not worked and vacation, sick leave, severance pay, and non-production bonuses; and indirect benefits, including legally required ones and voluntary insurance and retirement pension plans. Survey results were for production workers only and were expressed in terms of cents-per-man-hour.

In 1953, BLS conducted a feasibility study of collecting employer expenditures on selected supplementary employee remuneration in the manufacturing industries. The Bureau collected data on seven items—paid vacations; paid holidays; paid sick leave; premium pay for overtime; pension plans; insurance, health, and welfare plans; and legally required payments. Three basic measures of employee expenditures were used—percent of payroll, cents per hour, and cents per hour worked.

In 1955, BLS began regularly publishing two new reports—the "Digest of Selected Pension Plans" and the "Digest of Selected Health and Insurance Plans." Some of the plan features discussed in the pension plan digest included benefit formulas, normal retirement requirements, early retirement requirement and reductions, and disability benefits. Some of the plan features in the health digest included life insurance, accidental death, and dismemberment benefits, sick leave, hospital benefits, maternity benefits, surgical and medical benefits, and major medical benefits.

In 1959, BLS published the *Employer Expenditure for Selected Supplementary Remuneration Practices for Production Workers in Manufacturing Industries, 1959*. This publication ushered in a full scale, continuous program of compensation studies. Expenditures for production workers in manufacturing were published for a select list of items—including some new or growing practices, such as supplementary unemployment benefits and civic and personal leave—and were measured as cents-per-hour paid for and per plant man-hour, as well as one new measure—straight-time payroll. In 1960, a similar study was conducted in the mining industry; in 1961, finance, insurance, and real estate were surveyed; and in 1962, there was a study in manufacturing.

In 1963, another expansion of the program came, when a special study was conducted at the behest of the Federal government on supplementary remuneration in private industry for Federal white-collar and postal employees' pay comparability purposes. The survey marked a broadening of industry coverage to include manufacturing; transportation and utilities; trade; finance, real estate, and insurance; and a limited number of service industries. Employee coverage was limited to clerical, professional, administrative, and technical employees.

Sparked by Federal pay comparability questions, BLS conducted an initial survey of compensation expenditures for the entire private nonfarm economy in 1966. This was the first of surveys designed to study the entire private nonfarm sector, selecting manufacturing and non-manufacturing industries in alternate years. Surveys for the entire private nonfarm economy were produced in 1968, 1970, 1972, 1974, and 1977. This program was dropped after 1977, when the Bureau began collecting benefit cost data in the Employment Cost Index.

### Inflation, recession, and high unemployment

For many, the 1970s was a decade of pessimism. It opened with of a recession in 1970 and the painful ending of the Vietnam War.

Memories of the Great Depression made policy makers unwilling to use restrictive monetary and fiscal policy to contain inflation, because it was felt that the associated increase in unemployment would be unacceptable.[73] Instead, wage and price controls were introduced in August 1971.[74] An oil embargo, in 1973, brought on by the Organization of the Petroleum Exporting Countries (OPEC), led to rapid inflation and a recession; and there was another round of disruptions to the oil supply in 1979.

Both the civilian unemployment rate and the rate of change in consumer prices deteriorated in the second half of the decade. Between 1970-74, the average annual unemployment rate was 5.4 percent, while the average annual change in the Consumer Price Index (CPI) was 6.6 percent. From 1974-79, the figures edged up to 7.9 percent for unemployment and 8.1 percent for the CPI.

This decade was also marked by a number of large, highly publicized labor disputes. For example, in 1970, almost 210,000 postal employees walked off their jobs—the first mass work stoppage in the history of the U.S. Postal Service. In the same year, four railroad unions conducted a 1-day nationwide railroad strike. In 1971, two longshore strikes closed all major ports on the East, Gulf, and West Coasts; West Coast longshore workers resumed their strike after an emergency dispute injunction temporarily halted the walkout. In 1975, 80,000 employees of Pennsylvania conducted the first legal strike by State workers. In 1977-78, miners conducted one of the longest strikes in the coal industry. The decade ended with a 10-day nationwide strike by 219,400 over-the-road and local truckers in April 1979.

| Compensation component | 1966 | 1970 | 1977 | 1986 |
|---|---|---|---|---|
| Total compensation | 100.0 | 100.0 | 100.0 | 100.0 |
| Wages and salaries | 80.4 | 79.8 | 74.8 | 73.0 |
| Total benefits | 19.6 | 20.2 | 25.2 | 27.0 |
| Paid leve | 5.9 | 6.2 | 6.9 | 8.0 |
| Supplement pay | 3.8 | 3.1 | 3.1 | 2.3 |
| Insurance | 2.0 | 2.6 | 4.0 | 5.5 |
| Retirement and saving | 5.2 | 5.0 | 4.3 | 3.8 |
| Legally required | 2.6 | 3.3 | 4.3 | 6.4 |
| Other benefits | 0.1 | - | - | 0.1 |

NOTE: Data for 1966-77 were obtained from the Employers Expenditures for Employee Compensation survey and related to the average for the entire year. Data for the other years are from the Employer Costs for Employee Compensation survey and relate to March. While the data from the two surveys are not entirely comparable, they are similar.

Through the tumult, there was a continued change in the relative importance of benefit costs as a percent of compensation, rising from about a fifth of total compensation in 1970 to more than a quarter in 1986. Every measured benefit—the relatively small "supplemental pay" excepted—increased as a share of the compensation package.

During the 1970s, there were some important legislative and legal changes affecting compensation and workplace issues. Among the most important were the Employee Retirement Income Security Act of 1974 (ERISA) and the Revenue Act of 1978. ERISA regulated private pensions and imposed financial and accounting controls where pensions existed. ERISA also established the Pension Benefit Guaranty Corporation, to ensure that workers would be paid their vested pension benefits, if their pension plans were terminated. The Revenue Act encouraged flexible benefit plans, and created the 401(k) defined contribution retirement savings plan. It also allowed employees to make elective pre-tax contributions to a variety of savings vehicles, such as saving, profit sharing, and employee stock ownership plans. In retrospect, these laws were extremely important, as they contributed to the change in the share of compensation accounted for by pensions and other retirement benefits.

Other important legislation that affected active and retired workers without necessarily affecting compensation directly included the Occupational Safety and Health Act of 1970, which authorized the Secretary of Labor to establish occupational safety and health standards in the workplace; the Comprehensive Employment Training Act of 1973, which consolidated and decentralized Federal employment programs and provided funds to State and local governments who sponsored employment services; and the 1974 amendment to the Social Security Act, which provides automatic cost-of-living adjustments, based on the Bureau's Consumer Price Index.

Implementation of wage and price controls showed a need for a comprehensive measure of labor cost changes that was not affected by factors such as changes in overtime hours or shifts in employment among industries and occupations.[75] As a result, the Employment Cost Index (ECI) was born. The ECI was designed to:

- Be a timely and comprehensive measure covering all elements of employee compensation (wages, salaries, and benefit costs) and all employees in the U.S. civilian economy.

- Be a fixed-weight index free from the influence of employment shifts among occupations, industries, and establishments with different wage and compensation levels.

- Include internally consistent subseries (for example, occupational and industry groups) that describe the forces contributing to aggregate wage and compensation change.

The ECI, first published for the period September-December 1975, initially covered wage and salary changes for the private nonfarm economy. Changes for broad occupational and industrial groups, as well as changes by union status, geographic region, and area size were also presented. Although only a few new ECI series were added in the latter half of the 1970s, work was done to make possible publication of indexes for benefit costs and total compensation and to include State and local government workers.

In 1973, the General Accounting Office (GAO) had issued a report on the Bureau's white-collar pay survey—the Professional, Administrative, Technical, and Clerical survey (PATC)—emphasizing the need to expand the coverage of the survey. In the mid-1970s, the Bureau took action on GAO recommendations to improve the PATC survey, by expanding occupational coverage from 72 occupational work levels in 1975 to 100 in 1982. During the 1970s, BLS also developed a comprehensive training program, instituted a new quality measurement program, and conducted additional research to review and improve occupational definitions used in the survey.

In the late 1970s, at the request of the U.S. Civil Service Commission (now the Office of Personnel Management), the Bureau began gathering data on employee benefit plan provisions. The program, first called the Level of Benefits survey (LOB) and then the Employee Benefits Survey (EBS), was designed to provide information necessary for the Federal pay comparability process established by the Federal Reform Act of 1962 and later by the Federal Pay Comparability Act of 1970. Combining the LOB data with white-collar pay data was designed to help the Office of Personal Management compare compensation of Federal and private sector employees.

In 1979, a test survey was conducted in conjunction with the Bureau's collection of white-collar salary data that had the same industry and size-of-establishment restrictions. The test collected data for full-time workers on plan provisions and participation for six paid leave items, including sick, holiday, and vacation pay; health, life, and disability insurance; and pension plans.

During the 1970s, the Bureau continued to enhance its Industry Wage (IWS), Area Wage (AWS), and Service Contract Act (SCA) surveys—the latter to help ESA administer the SCA. The Bureau produced about 50 manufacturing and 20 nonmanufacturing industry wage surveys on a regularly recurring basic, and, in 1972, improved its AWS surveys by publishing indexes that used matched establishments. The SCA surveys, essentially the same as AWS surveys—except they were funded by the Employment Standards Administration (ESA) to fulfill its responsibilities under the Service Contract Act—were expanded from 65 in 1974 to 150 in 1977.

During the mid- to late-1970s, the Bureau also conducted surveys of industries and occupations that were exempt from FLSA minimum wage and overtime coverage. The ESA used survey results as part of a process to determine whether or not to continue these exemptions.

Reflecting a need for programmatic improvements in its major collective bargaining settlements program, the Bureau made a number of changes in the data elements it collected and published for that program series. BLS began publishing a separate series for the construction industry, covering settlements for 1,000 workers or more. This new series provided two types of data on wage-benefit changes. One showed the annual rates of scheduled increases over the life of the agreement; the other showed the first-year increase. Another enhancement in the program came in 1974, with publication of quarterly effective wage adjustments. Additionally, in 1979, a biannual series showing changes in the cost of bargaining settlements covering 5,000 workers or more in State and local governments was introduced.

### An economy in transition

The 1980s began on an uncertain note, with worries about the country's ability to compete in world markets and fears that high inflation rates would never end.[76] From 1980-82, the unemployment rate jumped from 7.1 to 9.7 percent but then dropped from year to year, to 5.3 percent in 1989. The 1982-83 recession, however, did seem to curb inflation, as the Consumer Price Index dropped from an annual change of 13.3 percent in 1979 to 3.8 percent in 1982. By 1984, the economy had rebounded, and there ensued a long period of sustained growth. Millions of new jobs were created, and there was a resurgence of American confidence.

During this decade, a number of forces worked to limit the influence of labor unions. Foreign competition grew in industries where unionism historically has been strong—especially the automobile and steel industries.[77] Additionally, employment growth had occurred in sectors—such as in services—where unions had typically not been dominant. As a result of these and other factors, trade union membership in the United States declined sharply as a share of employment:

| *Year* | *Total membership (thousands)* | *Union density* |
|---|---|---|
| 1980 | 22,377 | 24.7 |
| 1985 | 16,996 | 18.0 |
| 1990 | 16,740 | 16.1 |

The trend toward benefits accounting for a higher proportion of compensation costs continued, though at a slower pace than earlier. The slowdown in the growth of benefits as a proportion of compensation can be attributed primarily to health insurance and employers retirement costs. Over-the-year increases in health costs peaked at 23.5 percent in March 1983, dropped to 3.5 percent in June 1985, then rose to about 13 percent in 1989. Employers introduced a number of cost containment arrangements, including shifting more of health insurance cost to their employees.

The decline in the relative importance of retirement costs reflects the shift from defined benefit to defined contribution plans and a rising stock market that enabled employers to meet their defined benefit obligations with smaller outlays than before.

The Bureau's compensation program was influenced by these changes occurring in compensations plans, particularly the growing depth and breath of, and public interest in, data relating to benefit plans. Additionally, budget cuts in the late 1970s and early 1980s led to tough decisions regarding which BLS programs had to be scaled back or eliminated. The criterion increasingly used by Congress during this time when deciding what surveys to fund was whether the survey was of broad national interest.

BLS already had extensive experience in surveying and publishing wage data; but, by 1975, the Bureau realized that it also needed to capture and publish benefit information, particularly benefit costs, to produce total compensation cost measures. This initiative presented the Bureau with the challenges of identifying, measuring, and publishing benefit cost data every quarter, while continuing to publish timely, high-quality wage data.

To realize its objectives, BLS enhanced the ECI program. In 1980, rates of change in benefits costs were published for the first time for the private nonfarm economy and for a selected number of subseries. In 1981, wage and benefit indexes for State and local governments were added, as well as indexes for the combined private nonfarm and State and local government workforces.

In the mid-1980s, for example, Congress provided the Bureau additional funds to expand the ECI sample of establishments, in order to increase the number of series published, particularly in the service sector. As a result of this initiative, a new series was published for health services, including hospitals, that reflected the growing national interest in information about health care costs and their potential inflationary effects. At the same time, however, major cuts were made in the IWS and AWS programs, with the surviving surveys targeting major metropolitan areas and industries of special interest, such as temporary help supply companies.

Partly as a result of the ECI sample expansion, it was determined in 1987 that it was possible to begin publishing estimates of compensation cost levels—the employer cost per hour worked for employee compensation and its components—from data collected for the ECI.[78] This new data source, called Employer Costs for Employee Compensation (ECEC), replaced the Employer Expenditures for Employee Compensation that was abolished after its 1977 survey.

## The 1990s and the New Economy

During the 1990s, the resurgence in American confidence begun in the 1980s continued. Except for a mild recession in 1990-91, the economy expanded continuously through the 1990s. By the end of the decade, there were large budget surpluses. Over this decade, employment in the private sector grew by more than 20 million, to about 110 million. The largest employment gains occurred in retail trade (especially eating and drinking places) and the service industry (especially business and health services).

The unemployment rate declined steadily after 1992; but, surprisingly, there was no resurgence of inflation, as had occurred in other periods of sustained growth. The unemployment was at a 30-year low in 1999. Despite this growing tightness in the labor market, the inflation rate, too, declined, from 6.1 percent in 1990 to 1.6 percent in 1998. The CPI increased 3.4 percent in 2000, the highest since 1990, but still low given the unemployment rate.

One of the explanations given for the low rate of price increases was moderation in wage gains. Production workers' average hourly earnings increased 3.5 percent in 1990 and only 2.1 percent in 1992. Wage increases were in the 2.6- to 2.9-percent range during 1993-95 and in the 3.8- to 4.2-percent range during 1996-2000. Despite the relatively low rate of wage increases during the 1990s, *real* average earnings rose slightly, because prices increased even less.

During the first half of the decade, benefit costs rose faster than wages and salaries, but in the second half that relationship was reversed. This pattern largely reflected what was happening to employer costs for health insurance. The net effect of these changes was to return the structure of compensation in 2000 to about what it was in 1990. Dominant features of compensation in the 1990s were pay for performance and other forms of flexibility in what workers were paid.[79] At this time, pay reflected stock options, profit sharing, choices among benefits, and individual awards.

The decade saw several changes in the Bureau's core compensation programs to meet a broad set of administrative and programmatic needs, to capture changes in compensation practices, and to adjust to resource constraints. Most importantly, during this time, the Bureau began planning and implementing the development of a comprehensive, integrated compensation program, the National Compensation Survey.

A major change in the Bureau's wage survey program came with passage by Congress of the Federal Employees Pay Comparability Act of 1990 (FEPCA), which changed the pay-comparability process by creating a combination of national and local pay adjustments[80]

The FEPCA provided that Federal white-collar worker pay include a national adjustment (based on the ECI) and a locality adjustment. The latter required creation of a locality-based system to replace the single General Schedule that largely disregarded locality pay differences found in the private sector. The President's Pay Agent[81] was given primary responsibility for administering FEPCA, and FEPCA named the Bureau of Labor Statistics as the agency to conduct surveys for use in determining locality pay levels.

In the early 1990s, the Bureau combined its existing occupational wage surveys by area and industry—AWS, PATC, IWS, and SCA—into a single survey, the Occupational Compensation Survey (OCS), to fulfill its part in implementing FEPCA.[82] Given the tight budgetary environment and various needs of users of these existing surveys, it was decided to pursue three goals: Provide data required by FEPCA, continue to provide as much of the traditional data as possible, and streamline and cut back on the overall cost of collecting occupational wage data. The end result was development of a single survey that retained as many of the features of existing programs as possible.

After several years of collecting locality pay data in OCS, it became clear that, to gain maximum efficiencies, BLS would have to further coordinate the collection and processing of compensation data—that is, combine the OCS and ECI, ECEC, and EBS surveys. What were the driving forces that led the Bureau to adopt this umbrella approach to compensation? In effect, changing Federal pay requirements already had resulted in the integration of the AWS and PATC estimates for white-collar occupations and work levels. Also, health reform initiatives in 1993 pointed to the need for further integration of the Bureau's compensation program. While BLS produced substantial data on employers' health care costs and employees' health care costs, these data could not be combined, and plan costs could not be compared to plan provisions. This led the Bureau to re-examine its compensation programs and resulted in the formulation of the National Compensation Survey (NCS). The OCS was the first program included in the NCS, in 1997. The ECI, ECEC, and EBS[83] surveys are now being incorporated into the NCS.

The NCS is designed to meet a broad set of administrative and programmatic needs. It is a flexible, integrated, comprehensive effort that retains the best features of the previous surveys and does so in an efficient way, by minimizing the burden on establishments to provide wage and benefits data and by reducing duplication in data processing. The NCS's flexible design allows BLS to adjust the survey to changing administrative and programmatic needs and to capture changes in compensation practices that the survey must reflect.

The survey sample provides wage distributions and information on wages by occupation and work level, by area. The wage distributions show, for example, average earnings in the bottom and top quartiles as well as the mean and median. Work levels show earnings for different types of job requirements within each occupation, based on a factor evaluation system that makes use of nine factors, such as knowledge, supervision required, and complexity. Because these factors are also used in the factor evaluation system to grade Federal General Schedule workers, this information can be used to derive grade level equivalents for Federal workers, as well.

In addition to wage data, the NCS provides information on employer costs of benefits, as well as benefit incidence and provisions. This information will enable analysts to evaluate the cost of particular benefits, in addition to tradeoffs of wages for benefits. The large sample size for this wages and benefits portion of the NCS will permit the publication of new measures, such as compensation indexes for major metropolitan areas, as well as publication of more detailed industry and occupational series at the national level.

### Developments in Compensation Packages—Wages, Time-off, and Reimbursement Accounts: Health Care and Life Insurance Benefits and Retirement and Savings Plans

Over the 20th century, the composition of employee compensation packages has changed from wages only to a wide range of time-off, insurance, retirement benefits, and more, in addition to wages. The availability of voluntarily provided benefits (such as life insurance and pension plans) and legally required benefits (such as Sociality Security benefits) essentially began as either isolated benefits in the 1920s—or social tinkering in the 1930s—and began to escalate in the late 1940s, when health and welfare benefits became more common. As an illustration, employer costs for employee benefits as a percent of compensation increased from 3 percent in 1929 to 17 percent in 1955 and 27 percent in 1999.

| | 1900 | 1925 | 1950 | 1975 | 2000 |
|---|---|---|---|---|---|
| *Wages, time-off and re-imbursment account* | Wages | Wages | Wages | Wages and annual bonuses | Wages, and supplements that tie pay to performance |
| | | Paid holidays | Paid holidays and vacation | Paid holidays, vacations, and personal leave | Consolidated leave plan giving employee choice of days off |
| | | | | | Unpaid family leave |

## Developments in Compensation Packages—Wages, Time-off, and Reimbursement Accounts: Health Care and Life Insurance Benefits and Retirement and Savings Plans—Continued

| | 1900 | 1925 | 1950 | 1975 | 2000 |
|---|---|---|---|---|---|
| | | | | | Reimbursement account for child care expenses |
| ***Health care and life insurance benefits*** | | Company doctor | Basic medical plan through Blue Cross-Blue Shield | Basic medical plan plus major medical through commercial insurer | Choice of medical plans including Health Maintenance Organizations (HMOs) |
| | | | | Dental plan | Choice of dental, vision, and prescription drug plans |
| | | | | Medicare | Medicare and retiree health insurance |
| | | Benevolent association death and disability benefits | Fixed amount life insurance and weekly disability benefit | Life insurance varying with earnings; paid sick | Choice of life insurance amounts; paid sick leave |
| ***Retirement and savings plans*** | | | Social Security benefits available at age 65 | Social Security benefits available at age 65, with reduced benefits at age 62 | Social Security full benefits available at age 67, with reduced benefits at age 62, for workers born in 1960 or later |
| | | | | Defined benefit pension | Combination of pensions and 401(K) savings plans |

## Future trends in employee compensation

*"Truth in our ideas means their power to work."*
— William James

How will employee compensation programs evolve during the 21st century? Predicting developments in this field is difficult for many of the same reasons that making economic predictions is difficult. We live in a vibrant economy that routinely outpaces our ability to understand it fully and in a world where outside factors often change a system before we can model it precisely.

Like the economy as a whole, the compensation field is affected by forces working in opposite directions. Employers seek to curb labor costs to remain competitive in supplying goods and services, but at the same time may need to upgrade compensation programs to attract and retain skilled workers. Additionally, an aging population, by placing increased demands on employer health care and retirement plans, may prompt employers to adopt cost containment measures. At the same time, however, a small supply of young workers may prompt employers to enhance compensation packages to compete for qualified staff.

These opposing forces will challenge efforts to maintain correct and relevant statistics on compensation in this new century. The voluntary nature of most data collection relies on the cooperation of employers and especially human resource professionals. As these individuals face the difficult task of developing competitive compensation packages while limiting costs, their ability to comply with requests for detailed data may be strained.

Three major trends characterized employee compensation in the last years of the 20th century, and these trends will probably shape employee compensation in the early years of the new century. As with the last century, however, it is unlikely that the ways employees are compensated will evolve along a straight path. Companies and governments will try many alternative programs; some will work and become the paradigms of the 21st century; others will not and will be discarded or will be adopted in only a few workplaces.

***Aligning pay to organizational goals.*** The first of these three major compensation trends is aligning pay to organizational goals. As our Nation's economy becomes increasingly tied to world economic conditions, competitive pressures will prompt employers to seek ways to efficiently use their workforces. Employee compensation, in this environment, will increasingly be viewed as a tool for promoting increased productivity and innovation among workers. Compensation programs are, thus, likely to be geared to employee performance or desired characteristics such as skills or knowledge. Examples of these compensation programs include variable pay schemes that tie pay to individual or group performance and salary plans that reflect the possession or acquisition of knowledge or skills deemed critical to the success of the organization. Compensation in the 21st century is also likely to evolve in ways that tie employee pay and benefits to corporate performance. Examples include stock options and profit-sharing plans.

***Tailoring compensation to employee needs.*** The second major trend is tailoring compensation to employee needs. This is a way of efficiently delivering compensation to employees by giving them a choice in what they want or need, rather than providing a universal program that meets the needs of the average employee. Examples include choices among health care and within retirement savings plans, flexible work schedules and telecommuting arrangements, and reimbursement accounts. Implicit in this flexibility is the increase of employee responsibility in making prudent choices. On the other hand, this flexibility may be constrained, particularly if significant numbers of employees make poor choices. Social-policy concerns about the consequences of unwise choices, however, are less likely to stymie—than to shape—the evolution of this flexibility.

***Reconfiguring employee benefit plans.*** The third major trend is reconfiguring employee benefit plans to provide for a defined level of employer contributions, rather than a defined level of ultimate benefit. This has been the trend in retirement plans over the 1980s and 1990s and may spread to other types of employee benefits plans. Examples include defined contribution employee health insurance plans, defined contribution retiree health insurance plans, and employer-funded reimbursement accounts. These arrangements give employers greater control over costs than in the past and greater ability to predict costs. On the other hand, employees are required to absorb more risks associated with insuring against future events than formerly. Coupled with the trend to charge employees with more responsibility for retirement savings and other benefits, the move towards defined contribution insurance arrangements may spur countermeasures to insulate employees from these risks. For example, a defined contribution health insurance plan might be required to include a core set of benefits that guards employees against catastrophic expenses.

In the 1990s these three major compensation trends were seen as helping to meet the needs of a mobile workforce. With the expected labor shortages of the early years of the new century, however, these trends are likely to be tempered in ways thought to increase employee incentives for remaining with the organization. Employer drives to increase efficiency and curb costs may have to be balanced with one of the traditional goals of compensation programs–to acquire and maintain an adequate supply of skilled labor.

Capturing and reporting data that adequately illuminate these major trends will be a challenge for the Bureau of Labor Statistics and others. The movement toward compensation that is based more on individualperformance—and, thus, less standard—will require more data collection and innovative means of reporting results. No longer can pay be captured and reported as an hourly rate; all manner of pay such as individual bonuses, group bonuses, gainsharing, and stock options might need to be included in the new concept of pay.

The trend toward greater employee choice in compensation has already posed data collection and tabulation challenges; expansion of such choices will only compound the challenges. For example, where once employers offered only one health insurance plan, the often present choice of several plans means more data must be collected. And employee choice to substitute one benefit for another makes it more difficult to identify how much of a benefit cost is paid by the employer versus the employee. Additionally, flexibility in work hours (called flextime or flexitime) and work location (telecommuting or sometimes *flexplace*) make the traditional concept of *compensation per hour* less meaningful than before. Just as the 20th century saw an evolution in compensation statistics to address changes in the law and the growth of benefits, it is likely that statistics at the close of the 21st century will little resemble data available today.

## Sources of income for Women Aged 62 to 77 in 1999: Results from the National Longitudinal Survey of Women

Among women ages 62 to 77, sources of income differ by age, as shown by data from the 1999 round of interviews of the National Longitudinal Survey of Women. The most dramatic difference is the decreasing reliance of older women on wage income and the increasing number who draw income from Social Security. In the 12 months prior to the interview, 41 percent of women ages 62 to 64 received some income from their own wages, and 69 percent received income from Social Security.[1] For women older than age 65, the percentage that received income from their own wages was dramatically lower. Of women ages 65 to 69, 26 percent received wages, while 88 percent received income from Social Security. Of women ages 70 to 77, 14 percent received income from wages and 88 percent received Social Security benefits.

A long-held belief is that Social Security, pensions, and personal assets (savings, stocks, and bonds) are more likely to be sources of income for older persons as they age. While it is true that the percent of women who received Social Security benefits was greater for those older than age 65, the percent of women who received income from savings, stocks, or bonds was similar across the age categories for women ages 62 to 64, 65 to 69, and 70 to 77. Moreover, the receipt of pensions—either from a woman's own previous employers or those of a spouse—did not vary much by age.

While the receipt of income from pensions and assets does not vary much by age, it does vary by marital status. Not surprisingly, the household income of married women comes from different sources than that of women who are not married. Of women ages 62 to 64, 54 percent of married women received pension income, compared with 28 percent of unmarried women. Married women in this age group were also more likely than their unmarried counterparts to have received income from assets (57 versus 35 percent). These differences in income sources exist among women in older age groups, as well. Sixty-one percent of married women aged 65 to 69 received income from pensions, compared with 36 percent of same-aged unmarried women. Fifty-five percent of married women ages 70 to 77 received income from pensions, compared to 42 percent of same-aged unmarried women.

In addition to income from Social Security, pensions, and assets, many older women also receive transfers of income and gifts from their children or those children of a spouse. In the 12 months prior to the interview, 56 percent of women ages 62 to 77 received financial support or gifts worth more than $200 from children; this percentage varied little, regardless of the women's age or marital status.

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[1] Social Security benefits are permanently reduced based on the number of months benefits are received prior to age 65. For example, if one individual retires at age 62, benefits will be reduced 20 percent, whereas if that same individual retires at age 64, benefits will be reduced 6.7 percent. This may serve as an incentive to delay retirement.

**Percent of older women ages 62 to 77 in 1999 who received income from various sources in the 12 months prior to interview, by age and marital status**

| Age and sources of income | Marital status | | |
|---|---|---|---|
| | Total | Married | Non-married |
| Total, age 62 to 77 | | | |
| Own wages, salaries, tips and commissions | 23.1 | 22.2 | 24.3 |
| Spouse wages | 24.5 | 24.5 | — |
| Social Security | 84.1 | 87.6 | 79.8 |
| Pensions | 48.2 | 56.5 | 38.1 |
| Savings, stocks, bonds, trusts, estates | 47.4 | 52.5 | 41.2 |
| Government assistance | 15.1 | 12.6 | 18.1 |
| Intrafamily transfers | 56.0 | 57.0 | 54.7 |
| Ages 62 to 64 | | | |
| Own wages, salaries, tips and commissions, | 40.6 | 36.3 | 47.6 |
| Spouse wages | 33.8 | 33.8 | — |
| Social Security | 69.1 | 76.7 | 56.3 |
| Pensions | 44.0 | 53.4 | 28.0 |
| Savings, stocks, bonds, trusts, estates | 49.0 | 57.0 | 35.2 |
| Government assistance | 18.8 | 16.9 | 22.1 |
| Intrafamily transfers | 57.0 | 57.6 | 55.9 |
| Ages 65 to 69 | | | |
| Own wages, salaries, tips and commissions | 26.3 | 23.8 | 30.1 |
| Spouse wages | 27.2 | 27.2 | — |
| Social Security | 87.6 | 91.6 | 81.8 |
| Pensions | 51.1 | 60.6 | 36.1 |
| Savings, stocks, bonds, trusts, estates | 46.3 | 52.0 | 37.2 |
| Government assistance | 14.6 | 11.5 | 19.5 |
| Intrafamily transfers | 57.2 | 57.0 | 57.5 |
| Ages 70 to 74 | | | |
| Own wages, salaries, tips and commissions+B62 | 15.6 | 15.0 | 16.2 |
| Spouse wages | 19.2 | 19.2 | — |
| Social Security | 86.9 | 89.7 | 84.3 |
| Pensions | 48.2 | 55.4 | 41.3 |
| Savings, stocks, bonds, trusts, estates | 46.8 | 50.5 | 43.2 |
| Government Assistance | 14.5 | 12.0 | 16.9 |
| Intrafamily Transfers | 53.3 | 56.1 | 50.6 |
| Ages 75 to 77 | | | |
| Own wages, salaries, tips and commissions | 11.2 | 9.6 | 12.5 |
| Spouse wages | 12.4 | 12.4 | — |
| Social Security | 89.9 | 91.0 | 88.9 |
| Pensions | 47.4 | 53.5 | 42.8 |
| Savings, stocks, bonds, trusts, estates | 49.0 | 50.4 | 47.9 |
| Government assistance | 12.7 | 9.1 | 15.3 |
| Intrafamily transfers | 58.5 | 57.9 | 58.9 |

Individuals living with a partner, as if married, are not included.

Table 2-1. **Union scales of wages and hours of specified occupations, Chicago, 1913-25**

| Occupation | 1913 Hours per week | 1913 Earnings per hour | 1920 Hours per week | 1920 Earnings per hour | 1925 Hours per week | 1925 Earnings per year |
|---|---|---|---|---|---|---|
| Bricklayer | 44 | $.750 | 44 | $1.250 | 44 | $1,500 |
| Painter | 44 | .650 | 44 | 1.250 | 44 | 1,500 |
| Plumber | 44 | .750 | 44 | 1.250 | 44 | 1,205 |
| Stonecutter | 44 | .625 | 44 | 1.250 | 44 | 1,375 |
| Typesetter[1] | 48 | .500 | 48 | .988 | 44 | 1,191 |

[1] In the newspaper industry.

Table 2-2. **Composition of compensation costs in selected years, private industry workers**

| Compensation component | 1977 | 1986 | 1990 |
|---|---|---|---|
| Total compensation | 100.0 | 100.0 | 100.0 |
| Wages and salaries | 74.8 | 73.0 | 72.4 |
| Total benefits | 25.2 | 27.0 | 27.6 |
| Paid leave | 6.9 | 7.0 | 6.9 |
| Supplemental pay | 3.1 | 2.3 | 2.5 |
| Insurance | 4.0 | 5.5 | 6.1 |
| Retirement and savings | 4.3 | 3.8 | 3.0 |
| Legally required benefits | 6.9 | 8.4 | 9.0 |
| Other benefits | - | .1 | - |

NOTE: Data for 1977 were obtained from the Employers Expenditures for Employee Compensation survey and related to the average for the entire year. Data for the other years are from the Employer Costs for Employee Compensation Survey and relate to March. While the data from the two surveys are not entirely comparable, they are similar.

Table 2-3. **Percent changes in the Employment Cost Index for compensation and its components, December 1989-99**

| December | Compensation costs | Wages and salaries | Benefit costs |
|---|---|---|---|
| 1989-94 | 20.7 | 17.4 | 29.6 |
| 1994-99 | 7.1 | 18.8 | 12.9 |

Table 2-4. **Composition of compensation costs in selected years, private industry workers**

| Compensation component | 1990 | 1995 | 2000 |
|---|---|---|---|
| Total compensation | 100.0 | 100.0 | 100.0 |
| Wages and salaries | 72.4 | 71.6 | 73.0 |
| Total benefits | 27.6 | 28.4 | 27.0 |
| Paid leave | 6.9 | 6.4 | 6.4 |
| Supplemental pay | 2.5 | 2.8 | 3.0 |
| Insurance | 6.1 | 6.7 | 6.0 |
| Retirement and savings | 3.0 | 3.0 | 3.0 |
| Legally required benefits | 9.0 | 9.3 | 8.4 |
| Other benefits | - | .2 | .2 |

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# Endnotes

[1] See John T. Dunlop and Walter Galenson, eds., *Labor in the Twentieth Century* (New York, Academic Press, 1978), table 1.26.

[2] "Some aspects of health insurance," *Monthly Labor Review*, May 1917, pp. 746-51.

[3] Unemployment had fallen 9.9 percent in 1941 to 1.2 percent in 1944. See *Historical Statistics of the United States, Colonial Times to 1957*, Series D46-47 (Bureau of the Census, 1960). See also Dunlop and Galenson, table 1.25.

[4] See *Statistical Abstract of the United States, 1998* (Washington, U.S. Department of Commerce, 1998), table 654.

[5] Hourly costs of compensation were obtained from "Employer Costs for Employee Compensation," USDL 00-186 (Bureau of Labor Statistics, June 29, 2000), available on the Internet at ***ftp://146.142.4.23/pub/news.news.release/History/ecec.292000.news*** (visited June 14, 2001).

[6] The NIPA measure of supplements to wages and salaries does not correspond exactly to the Bureau of Labor Statistics definition of benefits. For instance, the BLS Employer Costs for Employee Compensation series defines a broader scope of payments as benefits, including supplemental pay for overtime and shift differentials and paid leave for such items as holiday, sick, and vacation leave. These same payments are included among NIPA's wage and salary estimates.

[7] Martin L. Primack and James F. Willis, *An Economic History of the United States* (Menlo Park, CA, Benjamin/Cummings Publishing Company, 1980), pp. 298-300. (An establishment is a single physical plant location.)

[8] See Primack and Willis, p. 282.

[9] See George T. Milkovich and Jennifer Stevens, "Back to the Future: A Century of Compensation," Working Paper 99-08 (Ithaca, NY, Cornell University Center for Advanced Human Resource Studies, July 1999), p.6.

[10] There is some disagreement with the view that, during the early 20th century, males worked until they died (that is, they had no opportunity for voluntary leisure after years of remunerative labor). A study showed that more than a fifth of males employed at late middle age left employment before their death. See Susan B. Carter and Richard Sutch, "Myth of the Industrial Scrap Heap: A Revisionist View of Turn-of-the-Century American Retirement," Historical Paper 73 (Cambridge, MA, National Bureau of Economic Research, 1995), p. 1.

[11] See Price V. Fishback and Shawn Everett Kantor, "A Prelude to the Welfare State: Compulsory State Insurance and Workers' Compensation in Minnesota, Ohio, and Washington, 1911-1919," *NBER Working Paper Series on Historical Factors in Long-run Growth*, Historical Paper 64 (Cambridge, MA, National Bureau of Economic Research, 1994), pp. 2-23.

[12] See Dunlop and Galenson, p. 30.

[13] U.S. Bureau of Labor, *Nineteenth Annual Report of the Commissioner of Labor: Wages and Hours of Labor* (Washington, U.S. Government Printing Office, 1905), p. 18.

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[15] See John M. Peterson and Ralph Gray, *Economic Development of the United States* (Homewood, IL, Richard D. Irwin, Inc., 1969), p. 357.

[16] See Robert B. Reich, *The Work of Nations* (New York, Vintage Books, 1992), p. 39.

[17] See Peterson and Gray, p. 358.

[18] See Reich, p. 40.

[19] See Dunlop and Galenson, p. 32.

[20] See Dunlop and Galenson, p. 29.

[21] See Dunlop and Galenson, p. 47.

[22] Joseph P. Goldberg and William T. Moye, *The First Hundred Years of the Bureau of Labor Statistics*, Bulletin 2235 (Bureau of Labor Statistics, September 1985), p. 71.

[23] H.M. Douty, "A century of wage statistics: the BLS contribution," *Monthly Labor Review*, November 1984, p. 20.

[24] See Goldberg and Moye, p. 71.

[25] See Goldberg and Moye, p. 107.

[26] "The Work of the United States Bureau of Labor Statistics," *Monthly Labor Review*, December 1927, p. 1.

[27] See Goldberg and Moye, p. 114.

[28] See Goldberg and Moye, p. 120.

[29] See Goldberg and Moye, p. 124.

[30] See Douty, p. 20.

[31] "Changes in Union Scale of Wages and Hours of Labor, 1913 to 1925," *Monthly Labor Review*, September 1925, pp. 54-76.

[32] See Goldberg and Moye, p. 133.

[33] *Employee Benefits* (Washington, U.S. Department of Commerce, 1997), p. 41.

[34] "Workmen's Compensation Legislation as of July 1, 1926," *Monthly Labor Review*, March 1927, p. 55.

[35] Fatal injuries were not covered in Oklahoma where a constitutional barrier of compensation for death was held to exist.

[36] See "Workmen's Compensation," p. 55.

[37] "Group Insurance Experience of Various Establishments," *Monthly Labor Review*, June 1927, pp. 76-86.

[38] A group insurance plan is a contract typically made with an employer and an insurance company to cover a group of employees. Premiums are typically based on the group's claim experience. Group insurance plans were first developed for life insurance and disability insurance.

[39] See "Group Insurance," p. 76.

[40] See "Group Insurance," pp. 78-79.

[41] Ibid., pp. 80-81.

[42] Ibid., p. 82.

[43] See Dunlop and Galenson, p. 27.

[44] See Peterson and Gray, p. 401.

[45] See Dunlop and Galenson, p. 31.

[46] See Dunlop and Galenson, p. 79.

[47] Workers' compensation laws were enacted in all but four States—Florida, South Carolina, Arkansas, and Mississippi. See Price V. Fishback and Shawn E. Kantor, "The Adoption of Workers' Compensation in the United States, 1900-1930," Working Paper 5840 (Cambridge, MA, National Bureau of Economic Research, November 1996), p. 49.

[48] Ross M. Robertson, *History of the American Economy* (New York, Harcourt Brace Jovanovich, Inc., 1973), p. 676.

[49] See Robertson, p. 677.

[50] See Fishback and Kantor, "A Prelude to the Welfare State," p. 32.

[51] See Robertson, p. 677.

[52] See "Historical Development," *Social Security Online* (Washington, U.S. Social Security Administration) on the Internet at ***www.ssa.gov/history/brief.html*** (visited June 24, 2001).

[53] Alvin Bauman, "Measuring employee compensation in U.S. industry," *Monthly Labor Review*, October 1970, p. 19.

[54] See Bauman, p. 19.

[55] See Goldberg and Moye, p. 170.

[56] See Goldberg and Moye, p. 160.

[57] See Douty, p. 20.

[58] See Goldberg and Moye, p. 160.

[59] See Douty, p. 20.

[60] Frances Jones, "Personnel Policies and Working Conditions in the Manufacture of Cigarettes and Tobacco," *Monthly Labor Review*, February 1937, pp. 319-40.

[61] See Jones, p. 319.

[62] See Jones, p. 320.

[63] Edward P. Sanford, "Wage rates and hours of labor in the building trades," *Monthly Labor Review*, August 1937, pp. 281-93.

[64] See Sanford, p. 284.

[65] Frances Jones and Dorothy Smith, "Extent of vacations with pay in industry, 1937," *Monthly Labor Review*, August 1938, pp. 269-74.

[66] Frances Jones and Dorothy Smith, "Characteristics of paid-vacation plans," *Monthly Labor Review*, December 1938, pp. 1225-38.

[67] See Jones and Smith, "Characteristics of paid-vacation plans," p. 1235.

[68] See Jones and Smith, "Characteristics of paid-vacation plans," p. 1274.

[69] See Jones and Smith, "Characteristics of paid-vacation plans," p. 1225.

[70] See Douty, pp. 16-28; and Bauman, pp. 17-24.

[71] Section 211 of the Taft-Hartley Act authorizes the Bureau to collect various collective bargaining data, including union contract data. The CWD is the predecessor to the *Compensation and Working Conditions* publication, which still exists today.

[72] See Douty, pp. 22-23; Bauman, pp. 17-24; and Allan P. Blostin, "An Overview of the EBS and the NCS," *Compensation and Working Conditions*, spring 1999, pp. 2-3.

[73] See J. Bradford De Long, "America's Only Peacetime Inflation: the 1970's" (Cambridge, MA, National Bureau of Economic Research and University of California at Berkeley, 1995).

[74] There were other parts to the economic package, including a 90-day freeze on wage and price increases and elimination of gold-dollar convertibility.

[75] Norman J. Samuels, "Developing a general wage index," *Monthly Labor Review*, March 1971, pp. 3-8.

[76] Floyd Norris, Christine Bockelmann, and Paul A. Vocker, *The New York Times Century*

*of Business* (New York, McGraw-Hill, 1999), p. 253.

[77] See, for example, Albert E. Schwenk, "Trends in the Differences Between Union and Nonunion Workers in Pay Using the Employment Cost Index," *Compensation and Working Conditions*, September 1996, pp. 27-33.

[78] Felicia Nathan, "Analyzing employers' costs for wages, salaries, and benefits," *Monthly Labor Review*, October 1987, pp. 3-11.

[79] See Milkovich and Stevens, p. 6.

[80] See Public Law 101-509, Nov. 5, 1990.

[81] The President's Pay Agent consists of the Secretary of Labor, the Director of the Office of Management and Budget, and the Director of the Office of Personnel Management.

[82] A more detailed description of OCS is provided in John Buckley and Elizabeth Dietz, "The Occupational Compensation Survey: A Retrospective," *Compensation and Working Conditions*, Fall 1997, pp. 40-46.

[83] Beginning in 1990, EBS, ECI, and ECEC data were collected from the same set of establishments using consistent definitions.

[84] Social Security benefits are permanently reduced based on the number of months that benefits are received prior to age 65. For example, if one individual retires at age 62, benefits will be reduced 20 percent, whereas if that same individual retires at age 64, benefits will be reduced 6-2/3 percent. This may serve as an incentive to delay retirement.

## Legislative and Regulatory Timeline

During the 20th century, Congress passed a number of laws that affected the American worker. Some laws provided a social safety net that protected workers against loss of income, due to unemployment, old age, or disability. Other laws protected workers' right to organize, bargain collectively, and be treated fairly by both their employers and union representatives. Separate laws banned socially unacceptable labor conditions such as child labor. Still others protected workers against adverse safety and health conditions; long hours; low pay; and discrimination based on race, sex, or national origin. In addition, some laws provided for job training and other services for the unemployed or underemployed, while other protected workers' benefits or encouraged new types of benefits.

| | |
|---|---|
| 1875 | American Express Company established the first private pension plan offered by a U.S. company. |
| 1884 | Federal Labor Bureau, the pre-decessor of the Bureau of Labor Statistics was established by the Hopkins Act. |
| 1891 | Kansas established the first State prevailing wage law. |
| 1903 | Department of Commerce and Labor was established by an act of Congress. |
| 1912 | Massachusetts adopts first minimum wage law for women and minors. |
| 1913 | U.S.Department of Labor was established by an act of Congress. It includes the Bureau of Labor Statisics, the Bureau of Immigration and Naturalization, and the Children's Bureau. |
| 1914 | Clayton Act limited the use of injunctions in labor disputes and provided that picketing and other union activities should not be considered unlawful. |
| 1916 | First Federal child labor law. Signed, but struck down. |
| 1920 | Begin conversion to 5-day workweek. Women's Bureau established. |
| 1926 | Railway Labor Act required railroad employers to bargain collectively and not discriminate against employees for joining a union. |
| 1931 | Davis-Bacon Act provided for the payment of prevailing wage rates to laborers and mechanics employed by contractors and subconactors on public construction. |
| 1932 | Norris-LaGuardia Act |
| 1933 | Wagner-Peyser Act creates U.S. Employment Service in Department of Labor. |
| 1935 | Federal Social Security Act provided a nationwide system of social insurance to protect wage earners and their families. |
| | National Labor Relation (Wagner) Act established the first national policy of protecting the rights of workers to organize and elect their representatives for collective bargaining purposes. |
| 1936 | Public Contracts (Walsh-Healy) Act set labor standards on Government contracts requiring the manufacture or purchase of materials. |
| 1938 | Fair Labor Standards Act set minimum wage, maximum hours, and time pay, as well as equal pay and child labor standards. |
| 1947 | Labor-Management Relations (Taft-Hartley) Act reiterated policies protecting rights of workers to organize and elect union representatives and placed some checks on union and management activities. |
| 1949 | An amendment to the Fair Labor Standards Act directly prohibited child labor for the first time. |
| | Courts decide that benefits are subject to collective bargaining. |
| 1958 | Welfare and Pension Disclosure Act required administration of health insurance, pension, and supplementary unemployment compensation plans to file plan descriptions and annual financial reports with the Secretary of Labor. |
| 1959 | Labor-Management Reporting (Landrum-Griffin) Act prohibited improper activities by labor and management, such as secondary boycotts; provided certain protection for the rights of union members; and required filing of certain financial reports by unions and employers. |
| 1962 | Manpower Development and Training Act required Federal Government to determine manpower requirements and resources and to "deal with the problems of unemployment resulting from automation and technological changes and other types of unemployment." |

### Legislative and Regulatory Timeline—Continued

| | |
|---|---|
| 1963 | Equal Pay Act prohibited wage differentials based on sex for workers covered by the Fair Labor Standards Act. |
| 1964 | Title VII of the Civil Rights Act established U.S. Equal Employment Opportunity Commission to enforce Federal statutes prohibiting employment discrimination. |
| 1965 | Medicare established under Social Security. |
| | McNamara-O'Hara Service Contract Act provided wage standards for employees performing work on Federal service contract. |
| 1968 | Age Discrimination in Employment Act made it illegal to discharge, refuse to hire, or otherwise discriminate against persons ages 40 to 65. |
| 1969 | Federal Coal Mine Health and Safety Act protected the health and safety of the Nation's coal miners. |
| 1970 | Occupational Safety and Health Act (OSHA) placed certain duties on employers and employees to assure safe and healthful working conditions. |
| 1974 | Employer Retirement Income Security Act (ERISA) imposed standards on employer-provided benefit plans. Act was designed to protect the security of pension promises made by private sector firms. |
| 1978 | Pregnancy Discrimination Act required employee benefit programs to treat pregnancy in the same way as illnesses. |
| | Revenue Act of 1978 permitted employers to create 401(k) plans. |
| 1982 | Job Training Partnership Act (JPTA) prepared youths and adults facing serious barriers to employment by providing job training and other services that would result in increased earnings, increased education and occupational skills, and decreased welfare dependency. |
| 1985 | Consolidated Omnibus Budget Reconciliation Act (COBRA) required employers that provide health care benefits to continue such benefits to formerly-covered individuals for a period of time after employer coverage ends. |
| 1986 | Strengthening of Age Discrimination in Employment Act. |
| | Tax Reform Act included provisions designed to simplify employer pension plan administration. |
| 1989 | Worker Adjustment and Retraining Notification Act provided protection to workers, their families and communities, by requiring employers to provide notification 60 calendar days in advance of plant closings and mass layoffs. |
| 1990 | Americans with Disabilities Act (ADA) established a clear and comprehensive prohibition of discrimination on the basis of disability. |
| 1993 | Family and Medical Leave Act mandated employers to provide unpaid time off for worker and family medical purposes. |
| 1998 | Workforce Investment Act |
| 1999 | Ticket to Work and Work Incentives Act |

# Chapter 3

# Economic Change and Structures of Classification

The 20th century encompassed enormous change in the structure of the U.S. economy. Two World Wars and the Korean and Viet Nam conflicts, combined with the Great Depression, OPEC oil embargoes, major structural changes in the global economy, and revolutionary computer technologies, all illustrate the importance of understanding how such shocks have affected our economy and will continue to affect it in the coming decades.

At the same time, the 20th century witnessed the evolution of the Federal statistical system. Methodological innovations, such as sampling theory, national income accounting, and the incorporation of computer technology, all improved the quality and timeliness of specific statistics.[1] In addition, the development of standardized classification systems provided more consistency across data systems. Classification systems create an order that demonstrates relationships and facilitates analysis.

In the statistical world, the availability of a universal classification system facilitates comparisons of findings across data collection efforts. At an even more basic level, classification systems are necessary to translate microdata into tables and charts that can be understood by data users.

Clearly, statisticians and economists need to work from a common base of classification, both for industries and for occupations. In a dynamic economy, any classification system must, of necessity, be a work in progress, continually balancing the need for a current and accurate description of the economy with the need for consistent time series data.

The purpose of this chapter is to present the evolution of classification systems in use in this country over the past 100 years for both industry and occupational data collection efforts. It would make for a better story if we could point to specific technological developments, such as the invention of the telephone or the semiconductor as the impetuses for change.[2] The fact is, however, that our economy has evolved as much in response to social, political, and economic factors, such as wars and depressions, as it has to specific technological innovations. That evolution has been taking place steadily over all of the past 100 years, and would require a lengthy volume indeed to spell out all the factors of change that have been involved. Our hope here is to give an outline of the factors leading to several key developments in U.S. economic taxonomy and, finally, to look to the future with some ideas of how our current classification systems will serve us in the coming decades.

## Industry Classification

Industry-based data collection began in 1810 with the institution of the Census of Manufac-

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tures.[3] Agriculture, mining, and fisheries censuses followed in 1840, and the Census of Governments began in 1850. Data were collected by a number of agencies, among them the U.S. Treasury Department and the U.S. Department of State.

The censuses carried out in 1810, 1820, and 1840 provided little more than the gross outlines of manufacturing development. The reasons are many, and include the fact that the Federal marshals who supervised the field operations also had other duties, and often were unable to devote the necessary time and attention to the censuses given into their charge. The marshals' assistants, the actual census enumerators, often were given only very sketchy direction or none at all, and may have had difficulty eliciting answers to the more complex economic questions embodied in the business censuses.

The marshals had the responsibility for compiling and classifying the data gathered in their jurisdiction. This decentralization introduced some irregularities in the reported information because the marshals were not trained statisticians, and they often used divergent procedures in carrying out their census duties. To add to the difficulties, many of the entrepreneurs of the day believed that the government should play a minimal role in economic affairs, and were suspicious and uncooperative when asked to provide information about their business to Federal agents. In many other cases, the enumerators were faced with businesses that maintained little or no ongoing record of their operations, and whose owners or managers were thus unable to answer the detailed queries with any more than the sketchiest estimates.

Industry classifications were very rough and ready during the first three manufacturing census efforts. The classification, such as it was, reflected a primarily demand- or market-oriented approach, which lumped more or less substitutable products into loose industry groupings. As a result of the inaccuracies of these first censuses, Congress established the Census Board, precursor to today's Census Bureau, on March 3, 1849. The Census Board oversaw the collection of data from establishments (once again by Federal marshals' deputies) and carried out the compilation in Washington with a cadre of trained clerks supervised by statisticians. Data items were classified by industry based on the product that the respondent said was produced at the establishment in largest quantity, essentially leaving the question of classification up to the respondents themselves.

Early critics of the Census Board's industry-based data collection programs noted that, because of the lack of focus on industry classification, not enough information was collected to adequately estimate total production of specific commodities across the economy. In 1925, analyst Laurence F. Schmeckebier described problems in classifying information on the flavoring extract industry.[4] Results of the 1921 Census of Manufactures showed the output of this industry to be $33,060,000, but this figure included output of other, secondary products by the industry that were not identified by commodity. Moreover, another $14,372,692 worth of flavoring extracts were produced as secondary products of other industries, although those industries were not themselves identified. It thus was impossible to determine the value of production of the commodity flavoring extracts from published reports on the 1921 Census of Manufactures. Indeed, problems surrounding how data were collected and what data were collected were so pressing that the issue of how industries were defined was not examined critically during the first 100 years or more of data collection.

Mobilization for World War I forced a number of Federal statistical agencies to the realization that they needed to collect data on an industry basis. Quite a few disjointed and inconsistent methods of defining industries sprang up, and the business establishments that were asked to respond to these data requests became alarmed at the lack of coordination and what they saw as poorly designed data collection efforts. The response burden quickly grew to the point that, in 1918, the War Industries Board established the Central Bureau of Planning and Statistics.[5] The Bureau undertook to:

(1) improve statistical operations by developing uniform standards and definitions,
(2) catalog government statistics, and
(3) advise agencies on statistical methods.

In 1919, the functions of this agency were transferred to the fledgling Bureau of Efficiency, which concerned itself with the coordination of statistical programs. It issued a report in 1922, recommending the centralization of nonadministrative statistical work in a Federal Bureau of Statistics, at which point the Bureau was disbanded, presumably to make room for this newly recommended central statistical office. The Bureau of Statistics was, however, never approved, and the issues of statistical and classification oversight were effectively shelved for the remainder of the 1920s.

As a result of the Great Depression and also because of political developments in Europe, interest once again grew in the mid-1930s for greater coordination of Federal statistical programs. On July 27, 1933, President Franklin D. Roosevelt signed an Executive Order, prepared by a committee of the American Statistical Association and the Social Science Research Council, authorizing the formation of the Central Statistical Board (CSB). CSB had as its primary responsibility "to formulate standards for and to effect coordination of the statistical services of the Federal Government incident to the purpose of the National Industrial Recovery Act." While four earlier attempts to coordinate Federal statistics programs had failed, CSB (through its successor agencies) was destined to survive right up to the present day. Most germane to the present discussion was the formation by the CSB in 1937 of an Interdepartmental Committee on Industrial Classification "to develop a plan of classification of various types of statistical data by industries and to promote the general adoption of such classification as the standard classification of the Federal Government."

Standardization of the industry classification plan was an important objective because various agencies were once again collecting industrial data, each using its own classification scheme. Such a situation made the comparison of industrial data prepared by different agencies difficult and often misleading. Work began on this standardized industrial classification in June 1938, and was guided by the following general principles:

1) The classification should conform to the existing structure of American industry.

2) The reporting units to be classified are establishments rather than legal entities or companies.

3) Each establishment is to be classified according to its major activity.

4) To be recognized as an industry, each group of establishments must have significance from the standpoint of the number of establishments, number of wage earners, volume of business, employment and payroll fluctuations, and other important economic features.

## The Standard Industrial Classification system

The result of all this work was compiled as the *Standard Industrial Classification Manual* (SIC) and was issued in duplicated form as two volumes: *Volume 1, Manufacturing Industries* (released primarily in 1939) and *Volume 2, Nonmanufacturing Industries* (released primarily in 1940).[6] The results were reviewed in light of the experiences of the agencies making use of the new classification system, and the first printed edition of the SIC was published for manufacturing industries in 1941 and for nonmanufacturing industries in 1942. Major revisions to the SIC were published in 1957, 1967, 1972, and 1987. These revisions were a result of cooperation among statistical agencies and the business sector, with overall coordination provided by the CSB, then by the Bureau of the Budget, and, finally, by the U.S. Office of Management and Budget.

Unfortunately, the SIC shared a major problem with all earlier industrial classification systems in that it lacked a theoretical foundation based on economic concepts.[7] While there was an underlying idea that an establishment should be classified by type of economic activity, this idea was not defined with sufficient rigor. With no single guiding economic principle of classification or aggregation laid down at the outset, the SIC evolved into a number of different classification schemes. In most cases, the product or activity dominated the classification decision but, in some cases, end use, raw materials, or market structure was the deciding factor. None of these schemes was incorrect, but they were not consistent. Moreover, as old industry definitions were modified or new industries were added, the logic seemed to make perfect sense for each change. Unfortunately, the result was that, over time, the SIC became a less and less homogeneous grouping of industries. Some examples may help clarify the inconsistencies that had crept in over the years.

*Supply-based vs. demand-based.* Two possible approaches to defining industries were from the supply side and from the demand side. In the supply-side approach, establishments were grouped into industries based on similarities in the production process. That is, establishments with similar or identical production functions were grouped together as an industry concept. In this approach "the production function should be understood as an abstract description of the engineering principles for a production process, or as a description of the production technology, not just as a list of inputs. In principle, it is engineering information about the production process that determines if establishments are sufficiently similar to justify grouping them by a supply-side concept." An example of this type of industry classification is provided by the two different chain-producing industries: SIC 3496, chain made from purchased wire, and SIC 3462, chain made from forged steel. Even though the end products of these two industries were good substitutes for each other, the production processes differed significantly; thus, the decision was taken to follow a supply-side approach to industry definition in this case.

A demand-side, or commodity-oriented, classification concept groups together commodities or services that have similarities in use, that belong together, that are used together for some purpose, or that define market groupings. Consider the apparel industries. Apparel industries are split between men's and boys' apparel and women's and girls' apparel. Clearly, the production technology is virtually indistinguishable between the two groupings, yet the markets are different in terms of marketing approach and pricing.

*Embodiment of the true economic structure.* A frequently encountered statement in the early economic classification literature is that the classification system should "reflect the structure of the economy." If a well-defined economic concept of "structure of the economy" does not exist, however, the potential for difficulties arises over time. In one view, the structure of the economy encompasses what industries exist, where they are located, what inputs they use, what outputs they produce, and what markets they serve. Yet, one must question whether the SIC really did accomplish this purpose. In the 1987 SIC, 57 percent of the four-digit SIC codes are goods-producing industries while 43 percent relate to the entire nongoods-producing sector. In 1987, however, only 45 percent of real gross domestic product was accounted for by the goods-producing sector, while 55 percent arose in service-producing industries. Nonagricultural employment in 1987 was split 24 percent to 76 percent between goods-producing industries on the one hand, and service-producing and government industries on the other. On the basis of these estimates, many economists and statisticians were increasingly concerned that the SIC did not reflect the true structure of the economy.

Another definition of "structure of the economy" refers to the organization of production units for marketing goods or services, including the degree of vertical integration. For example, two separate meat processing industries are recognized in the 1987 SIC, meat packing plants (SIC 2011) and sausages and other prepared meat products (SIC 2013). The two produce the same output—meat products—but meat packing plants slaughter the animals they use in their production process while the other industry produces meat products from purchased carcasses and other meats. Here, the degree of vertical integration was the deciding factor in splitting these two sets of establishments. At the same time, however, poultry slaughtering and processing (SIC 2015) includes both types of processing establishments, regardless of whether they actually slaughter the poultry themselves.

Another "structure of the economy" issue concerns the extent to which some industries combine activities. The hotels and motels industry (SIC 7011), for example, encompasses many distinct economic activities, including restaurants, bars, room rental, and gift shops, many of which also are enumerated in other four-digit SIC categories. By including the value of production of all these distinct activities in one industry, the statistics relating to the other four-digit SIC codes are distorted to a degree that may not be immediately apparent.

Finally, many economists and statisticians noted that the SIC was unable to recognize new or emerging industries in a timely manner. The point of all of these examples is not to judge which of them were "right" or "wrong" but to point out the growing number of inconsistent treatments that had crept into the SIC scheme of classification, inconsistencies that were due almost entirely to a lack of a unified economic concept of the industry and of the proper way to categorize establishments by industry.

The enactment of the North American Free Trade Agreement (NAFTA) formalized a free-trade area among the United States, Canada, and Mexico. In 1993, when the agreement was signed by all three countries, the U. S. industry classification system was governed by the 1987 SIC. Canada's classification system dated from 1980, and Mexico had no industry classification system in place (its first was published in 1994). To meet the monitor-ing requirements built into NAFTA, a coordinated industry classification needed to be developed to suit all three economies. This turned out to be the ultimate argument for replacing the Standard Industrial Classification.

### The North American Industry Classification System

An International Conference on the Classification of Economic Activities was held in Williamsburg, VA, in 1991. As a result of that conference, the U.S. Office of Management and Budget established the Economic Classification Policy Committee (ECPC) in 1992, chaired by the Bureau of Economic Analysis and with representatives from BLS and the Census Bureau. The charter of the ECPC was to undertake a "fresh slate" study of alternate economic concepts by which to categorize industries and to recommend changes to or replacement of the SIC system of industry classification.

Working papers of the ECPC during those first years provided a detailed analysis of conceptual problems with the existing SIC system, along with a set of alternative strategies regarding the development of a system that would replace the SIC. These "straw man" proposals formed the basis for extensive comment and debate, not only among government statisticians and economists, but also among the users of SIC-based statistics from academia and the business community. As a result, the ECPC developed a set of final proposals for a system that would replace the SIC, and that they hoped would adequately address the problems and inconsistencies that had been developing over the 50-year lifespan of the SIC.

The result of ECPC's work was published in 1997—the North American Industry Classification System (NAICS), constructed within a single conceptual framework.[8] Economic units that have similar production processes are classified in the same industry, and the lines drawn between industries demarcate, to the extent practicable, differences in production processes. Special attention was given to developing these production-oriented classifications for:

(1) new and emerging industries,
(2) service industries in general, and
(3) industries engaged in the production of advanced technologies.

NAICS went on to provide enhanced industry comparability among the economies of the United States, Canada, and Mexico, and it provided increased compatibility with the two-digit level of the International Standard Industrial Classification of the United Nations.

NAICS divides the economy into 20 sectors. (See box entitled "A comparison of the NAICS and the SIC structures.") Industries within these sectors are grouped according to the production criterion. Although the goods/services distinction is no longer explicitly reflected in the structure of the new classification system, 5 sectors are largely goods-producing, and the remaining 15 are entirely service-producing industries.

What exactly has NAICS accomplished? ECPC has summarized what makes NAICS a better economic classification system in terms of relevancy, consistency, comparability, and flexibility.[9]

*Relevancy.* NAICS provides 1,170 detailed industry classifications for the U.S. economy, a 15-percent increase in total classifications, compared with those available under the SIC. The new system replaces or revises approximately 60 percent of the previously available SIC industries, and provides 358 new industries not identified at all under the SIC. The resulting expanded and revised industry classifications better mirror businesses and methods of business operation in our modern economy. (Some of the new industries identified under NAICS are shown in the box entitled "New NAICS industries.")

*Consistency.* NAICS changes key classification concepts and definitions, a development that may have substantial impacts on how businesses are classified and the number and kind of businesses in particular classification groupings. Each business is now classified into a detailed industry based on the production processes it uses.

Use of this production-based classification principle has an impact on the boundary between retail and wholesale trade sectors. Retailers typically sell merchandise in small quantities using public-oriented methods such as mass media advertising, placement of stores in high-traffic locations, and design of attractive displays. Wholesalers sell goods in large quantities using business-oriented methods such as developing specialized catalogs, nurturing customer contacts, and locating warehouses or offices judiciously. This definitional approach improves the classification and statistics for each sector but also changes them. For example, more than half of the petroleum bulk stations previously classified as wholesalers under SIC will be classified as retailers under NAICS.

*Comparability.* NAICS was developed, is being implemented, and will be maintained by statistical agencies of Canada, Mexico, and the United States. When the system has been fully implemented, comparison of industrial statistics for all three countries will be possible, and completely new information about cross-border trade flows and business markets will be available. For Canada, the *NAICS Canada Manual* has been published and implementation of the new classification system took place over the 1997-2000 period. For Mexico, NAICS implementation is in progress. That country's 1998 Economic Census was carried out using NAICS.

**A comparison of the NAICS and the SIC structures**

| NAICS | SIC |
|---|---|
| Sector (two-digit)<br>Subsector (three-digit)<br>Industry group (four-digit)<br>NAICS international industry (five-digit)<br>National industry (six-digit) | Division (one-digit)<br>Major group (two-digit)<br>Industry group (three-digit)<br>Industry (four-digit) |
| Total (713 five-digit industries)<br>Agriculture, forestry, fishing, and hunting (42 five-digit industries)<br>Mining (10 five-digit industries)<br>Utilities (4 five-digit industries)<br>Construction (28 five-digit industries)<br>Manufacturing (179 five-digit industries)<br>Wholesale trade (69 five-digit industries)<br>Retail trade (62 five-digit industries)<br>Transportation and warehousing (42 five-digit industries)<br>Information (28 five-digit industries)<br>Finance and insurance (32 five-digit industries)<br>Real estate and rental and leasing (19 five-digit industries)<br>Professional, scientific, and technical services (35 five-digit industries)<br>Management of companies and enterprises (1 five-digit industry)<br>Administrative and support, waste management and remediation services (28 five-digit industries)<br>Educational services (12 five-digit industries)<br>Health care and social assistance (29 five-digit industries)<br>Arts, entertainment, and recreation (23 five-digit industries)<br>Accommodation and food services (11 five-digit industries)<br>Other services (30 five-digit industries)<br>Public administration (29 five-digit industries) | Total (904 four-digit industries)<br>Agriculture, forestry, and fishing (58 four-digit industries)<br>Mining (31 four-digit industries)<br>Construction (26 four-digit industries)<br>Manufacturing (459 four-digit industries)<br>Transportation and public utilities (67 four-digit industries)<br>Wholesale trade (69 four-digit industries)<br>Retail trade (64 four-digit industries)<br>Finance, insurance, and real estate (53 four-digit industries)<br>Services (50 four-digit industries)<br>Public administration (27 four-digit industries) |

*Flexibility.* The intention is that NAICS classifications will be updated on a regular basis to keep pace with changes in the U.S. economy. All three North American countries will review NAICS every 5 years and make necessary revisions.

The NAICS implementation schedule within the U.S. statistical community is spread out over a 7-year period. (See exhibit 1.) The first major program affected by NAICS was the 1997 Economic Census. For a sample of the data that have been made available in the Economic Census, see Annex A.

Despite its great advances in industry classification, the existing NAICS is still a work in progress. Due to severe time constraints, the ECPC decided to leave the wholesale and retail trade sectors and the construction sectors essentially unchanged from the 1987 SIC. A second edition of NAICS, scheduled for release in 2002, will address the revisions in these three sectors, as well as revisions of the other 1997 industries as required.

Finally, for all those researchers who depend on the availability of consistent time series data, it may well be a decade before an adequate set of data has been generated under NAICS. For the 422 industries that are substantially unchanged between the SIC and NAICS classification schemes, there is no problem—analysts will simply continue to gather data as they are released. For the 748 industries that are either new or substantially revised from the SIC, the problem becomes a bit stickier. For a time, it will be necessary to bridge backward to a consistent SIC basis (insofar as that can be carried out) but, ultimately, the analyst will find it necessary to bridge earlier SIC-based data forward to the NAICS. Both bridge processes will require some carefully thought-out approaches and well-documented assumptions, especially in light of the fact that only one period of data overlap is planned for most industry-based data collection efforts.

## Occupational Classifications

"Occupations" are jobs or positions that employ the knowledge and skills of people. Positions and jobs are the structures of work that employers offer to workers. When a position or job is filled by a person, it becomes that person's occupation. When a person is performing in a position or job, the person is referred to as a worker. An occupation is defined by the interaction of the work organized in a position or job, the work content, and the education and skills that a person brings to performing that work content. Occupational information looks beyond titles to the work content, education, and skills that are required by the structure of work in our economy. The products of occupational analysis are the structure of positions and jobs in the economy, the skill base of the employed workforce, and the economic contribution of the employed workforce as measured by wage data. The development of these products in the form of data series creates a dynamic picture of the change occurring in the character of work in the economy. Occupational data may be analyzed either within industry classification structures or solely within their own occupational classification structure. These concepts create a framework for a "job economy."

### Purpose and value

An occupational classification is the logical structure used by statisticians, economists, and persons in other disciplines to describe and quantify the variety of ways in which a workforce is remuneratively employed. The actual variables that define and influence the occupational structure of the American workforce are even more complex and dynamic. The availability of a classification structure, even with inherent limitations, permits the collection of statistics that measure these variables and represent others by inference. The level of wages earned by the employed workforce is one of the most evident of such measures. In turn, these wages represent the economic contributions and productivity of various workforce segments defined in the classification structure. The products and services of the employed workforce and the market context in which they are delivered are indications of the more complex variables that shape the workforce. For example, energy production is one of society's continuing needs. Throughout a complex chain of consumer demands and production requirements, the number of persons employed in this pursuit and their corresponding wages are determined.

In its dynamic aspects, the actual workforce structure is derived from the final demand for a commercial and consumer "market basket" of products and services. The demand for products and services reflects a variety of competing requirements for the Nation's standard of living and the means to produce and maintain it. How individual occupations are structured

**New NAICS industries**

Semiconductor machinery manufacturing
Fiber optic cable manufacturing
Software reproducing
Convenience stores
Gasoline stations with convenience stores

Warehouse clubs and superstores
Food (health) supplement stores
Pet and pet supply stores
Pet care services
Cable networks

Satellite telecommunications
Paging
Cellular and other wireless telecommunications
Telecommunications resellers
Credit card issuing

Temporary help services
Telemarketing bureaus
Hazardous waste collection
HMO medical centers
Continuing care retirement communities

Casinos
Casino hotels
Bed-and-breakfast inns
Limited-service restaurants
Automotive oil change and lubrication shops
Diet and weight reducing centers

is largely a matter of technology, a combination of human and machine technologies. Products and services themselves reflect advances in science, engineering acumen, and consumer knowledge. For example, in retail distribution, workers selling the same goods may be employed by a traditional retail outlet, a discount or warehouse store, or an Internet marketer.

Some may be inclined to view an occupational classification system as a window into the activities of the employed workforce. However, there is another, more important perspective that this discussion presents. As treated here, an occupational classification structure is more like a prism or a crystal. Depending upon our perspective—which may be political, social, economic, technological, or cultural—the same occupational classification structure can suggest a variety of different parameters that have shaped it and defined its contributions to our current standard of living and way of life. Although it is difficult to know all these parameters directly, they may be known by inference. For example, the form and functions of products such as automobiles change as a result of science and technology. How and where these automobiles are produced is determined by technology and economic choice. The form and quality of these products often are the result of cultural preferences and education. The workforce changes subtly in response to all of these forces.

### Why classify occupations?

An occupation is a group of jobs in which workers perform similar tasks, duties, or activities at similar skill levels. A job is a group of similar positions and a position is a slot in an organization occupied by a single individual.[10] Occupations may be clustered into groups based on some common element, such as similarity of work, workplace, or worker characteristics. An occupational classification system helps define the occupational structure in the workplace and provides a framework for descriptive occupational statistics, such as employment levels, job openings, earnings, and education.

There are four primary groups of users of this information:

(1) workers and potential workers needing information about likely jobs,

(2) employers needing labor market information for personnel, marketing, or planning purposes,

(3) counselors in the academic and vocational sectors, and

(4) researchers, including economists and sociologists, and related policymakers, for analyzing labor market trends, social policies, and other issues.[11]

The users of occupational information also may be grouped as micro-users and macro-users. Micro-users require information to assist in structuring jobs, defining job requirements, recruiting workers, developing career plans, seeking training opportunities, and aiding others in finding jobs and related training. Macro-users require occupational information to evaluate the structure and performance of the economy, develop models for studying labor market dynamics, identify current and potential areas of worker dislocations, promote targeted economic development efforts, and plan and implement education and training programs.

Occupations may be viewed from a survey perspective. The Census of Population and the Bureau's Current Population Survey ask open-ended questions about household members' occupations, with responses referred to as occupational titles. Census analysts group related titles, and these groups constitute census occupations. Closed-end surveys, typically of employers, provide occupational definitions that specify the range of job activities included, and data collected represent all workers whose position descriptions match these definitions.

While positions have independent existence, jobs and occupations are, in some essential way, arbitrary and artificial.[12] Most occupations do not have natural boundaries. Positions and jobs can be viewed as existing on a continuum, along which classifiers set boundaries.[13] The breadth of occupations depends, to a great extent, on the level of detail desired and the total number of occupations in a system. For example, mechanics, automotive mechanics, automobile body repairers, or automotive glass installers each could be an individual occupation. In a system with more detailed occupations, higher levels of aggregation might become minor or major occupation groups, rather than occupations. There is tremendous potential for occupational detail. The 2000 census, for example, lists about 31,000 individual job titles, and the 1991 Dictionary of Occupational titles lists more than 12,000 jobs.

Education or skill level also may be considered in determining boundaries—for example, to ensure that there are distinctions among "professional," technician, and aide occupations in the same field or among craftworkers, (semiskilled) operatives, and helpers.[14] Use of this criterion, in particular, encourages homogenous groupings, so that meaningful inferences can be made about characteristics of individual cases. Obviously, the greater the level of occupational detail, the more homogeneity possible. However, limited sample size or inadequate responses to open-ended questions may limit the amount of occupational detail. For example, distinctions among short order, institutional and cafeteria, and restaurant cooks, or between light or delivery services and heavy and tractor-trailer truck drivers have been perennial problems in household surveys. Employer-based surveys are better at collecting this information and permit the gathering of more detail. The appropriate level of detail also may be determined by the range of job tasks. Many health technologist, technician, and therapist jobs are very specialized, with workers performing a limited range of tasks, generally specified by licensing boards. In contrast, sales jobs tend to be general, with most having common tasks.[15] This suggests that sales occupations be specified in relatively less detail than health occupations.

The collection of data describing occupations, the process of organizing it, and the analysis of occupational data require a conceptual toolkit. Definitions of terms are a logical starting point. While the 31,000 job titles in the 2000 census index have importance in general socioeconomic terms, their usefulness in economic analysis is limited by the fact that household data are reported by title, without definition and verification of job content. Even if every title were supported by a unique definition of job content that was verified, the large number of jobs makes organization and analysis of this information impossible. In order to arrive at a structure for organizing and analyzing occupations, a taxonomy built upon similarities is needed. The structure of the taxonomy should be flexible enough to admit new occupations as they develop. Similarities within and between groups in the taxonomy are required. Work content and skill requirements are basic similarities among jobs. Formal education, licensing, and certifications are other similarities that may be considered.

For purposes of illustrating the conceptual tools used in occupational analysis, consider how the job "bus driver" presents complexities that are not evident at first glance. Bus drivers differ and share similarities based upon the points they connect and the distances they drive. Likewise, they may operate commercial vehicles of various sizes. Bus drivers convey different groups of passengers with varying needs for assistance, such as those related to infirmities and disabilities, luggage, special fare rates, and safety requirements. There may be different legal and licensing requirements for operation of certain classes of vehicles or groups of passengers. A taxonomy for "bus drivers" must take these similarities and differences into account. In the Standard Occupational Classification (SOC) system (p. 106), bus drivers who drive large commercial buses on a scheduled basis over regular routes, on charters, or as private carriage are classified as "bus drivers, transit and intercity." Those who transport students or special clients such as the elderly or disabled are classified as "bus drivers, school." Consider now the complexity of following this same process in developing a taxonomy for 31,000 jobs that can be reduced to a manageable and meaningful number of detailed occupations about which survey data can be collected and analyzed.

There have been two basic systems used to classify occupations. One, classifying occupations by the industry in which they are concentrated, was used by the Decennial Census of Population through 1930. The other, classifying by some combination of several factors—nature of the work performed, skill level, education requirements, and socioeconomic class, with only minor regard for industry in which occupations are concentrated—has been used in all later systems.

No single classification system can create occupational groupings to suit all purposes. For example, systems based solely on work performed do a poor job of grouping occupations by required level of education.[16] The greater the level of occupational detail, the easier it is to rearrange occupations to meet alternative analytical purposes.

The distinction made between the characteristics of workers and those of occupations is useful for purposes of discussing supply and demand dynamics that may determine the content of occupations. These two sets of characteristics overlap and interact in the definition of particular occupations and in the determination of the wages that the incumbents are able to earn. When worker characteristics are defined in job terms, the result is a definition of employer demand requirements. Conversely, when worker characteristics are defined in terms of education, training, and skills; the resulting definition represents the supply of workers. These distinctions come into practical play when surveyed work content is classified. For example, work performed is defined by employers, while education and skill represent assets that workers bring to bear in performing the defined work. Sometimes, problems may arise when classifying occupations because worker characteristics such as education, licenses, and certifications may be assigned undue importance in defining the skill requirements for the performance of certain work. Given jobs may be performed within a wide range of educational accomplishments and skills. Any imposing of a particular educational or performance level in defining an occupational category might artificially disassociate occupational categories that have the same performance requirements. Accepting a wider range of educational and skill qualifications in job definitions will result in a wider range of associated wage rates. These wage rates might be the best reflection of the interaction between the characteristics of occupations and the characteristics of workers.

New occupations can be added or rapidly growing ones split, while declining occupations can be combined or deleted to reflect the changing distribution of employment or the effect of new technologies and business practices. Some "new" occupations are, in fact, simply spin-offs of long-existing occupations. New job tasks generally are first assumed by workers experienced in related tasks in existing occupations. These tasks may remain comfortably classified within existing occupations or may eventually be spun off.

To determine which jobs are appropriate for spin-offs, occupational classification specialists look for groups of jobs 1) with tasks and activities that are sufficiently distinct from those of other jobs, and 2) that show potential for growth. They rely on anecdotal evidence; labor market research, such as that conducted by Occupational Analysis Field Centers;[17] large numbers of responses on census questionnaires; or employer responses to questions about occupations not listed on survey forms. Early identification of new jobs that require formal training is important so that data for career guidance and education planning can be collected. Yet, this can be difficult. Many groups of jobs identified as "new and emerging" in the past never grew much or received further attention.[18] In contrast, computer jobs, which might have been identified as occupations during the 1950's, were not, but it was not then obvious that computers had enough applications to support much employment growth.[19]

The current occupational employment information obtained from employers has no immediate, direct use in the study of labor market mobility dynamics. Data needed for mobility studies are collected through surveys that follow individuals over time, such as the Current Population Survey. While it is theoretically possible to discuss the elasticities of worker job choices within and among industries, the data needed to test related hypotheses currently are unavailable or imprecise. Similarly, the elasticities of employer demand for workers existing between a given occupational category and closely related categories cannot be gleaned from available data at this time, and no known plans exist for collecting suitable data in the near future.

Some economists have identified what they consider economic criteria for the structuring of occupational classification based on elasticity criteria. These are standardization of occupational classifications, adaptability to change over time, ability to reflect technological change, responsiveness to changing educational policy, and the range of substitution possibilities available to employers. If all these criteria were met, the available occupational information would provide a consistent framework within which to study employer selection decisions and worker job choices. The current SOC system is a move in the direction of providing a needed standardized framework within which worker mobility may be studied.

### The early census approach

The 1900 census specified 475 occupations (but published data on 303), developed from about 17,000 titles; the 2000 census allowed for 503 occupations, developed from about 31,000 titles. From 1870 to 1930, census occupations were organized within an industrial framework. Occupations were placed in the industry of greatest employment, even if much of their employment was in other industries. (Several of the industries, however, may be more accurately described as service groups.) The 1900 census specified five major categories:

(1) Agricultural pursuits
(2) Professional service
(3) Domestic and personal service (including health, food service, and protective service)
(4) Trade (including banking, insurance, and real estate) and transportation (including communication)
(5) Manufacturing and mechanical pursuits (including construction, fishing, and mining)

The 1910 census was expanded to allow for nine major occupational categories.[20] There also were numerous subgroups, consisting mostly of managers, foremen, operatives, or laborers specified by detailed industry, but few occupational subgroups. This system generally grouped occupations producing similar goods and services and located on the same promotion ladders—for example, helpers and apprentices, journey-level workers, supervisors, and managers.

### The revised census approach

In 1938, the American Statistical Association and the Central Statistical Board appointed a joint committee on Occupational Classification to devise a standard classification. (The Board also formed a committee on Industrial Classification, as discussed in the previous section.). This classification was based on some combination of similarity of work, education requirements, skill level, and socioeconomic class, with only minor regard for industry in which occupations were concentrated. It was first used in the 1939 Dictionary of Occupational Titles (DOT), published by the U.S. Employment Service (USES) to present job descriptions and other nonstatistical information about occupations. It also was used, with some modification, to organize data on occupations collected in the 1940 census. The revised census scheme consisted of 11 major groups:

(1) Professional and semiprofessional
(2) Farmers and farm managers
(3) Proprietors, mangers, and officials, except farm
(4) Clerical, sales, and kindred workers
(5) Craftsmen, foremen, and kindred

(6) Operatives and kindred workers
(7) Domestic service workers
(8) Protective service workers
(9) Service workers, except domestic and protective
(10) Farm laborers and foremen
(11) Laborers, except farm

Occupations with similar work functions were placed in the same group and groups were arranged in a hierarchical system that corresponded, more or less, with skill and training level and socioeconomic status.[21] The new system grouped all managers together, and did the same for craftworkers, operatives, and laborers. Sales workers, who had been grouped with wholesale and retail dealers and managers and other workers in the trade group, were now combined with clerical workers.[22] The domestic and personal service group was split, and the professional service group became professional and semiprofessional workers.[23] These major groups were more homogenous than the industry groups.

The 1940 census system had another advantage. It permitted tabulation of wage and salary employment data by industry *and* occupation,[24] and calculation of occupational staffing patterns—each occupation as a percent of total employment in every industry. This made possible construction of the BLS Industry-Occupation matrix, a key tool in developing occupational employment projections.[25] However, the system, like its predecessor, lacked occupational subgroups; within groups, occupations were simply listed alphabetically.[26]

## A period of transition

Since the 1960s, policymakers, academicians, government administrators, and researchers have independently recognized the changing character of the American economy. Some might term it a mature economy; others might characterize it as "post-industrial"; many see it as part of a global network; and others see it as a high-technology economy, characterized by knowledge industries. All of these observers are reporting on or projecting the changing character of the "work structure" of the economy. The results of this recognition have contributed to major paradigm shifts in the way in which America's industries will be viewed. The change from the Standard Industrial Classification system entailed a change in fundamental concepts, defining industries in terms of processes rather than products. The change from the census system of classifying occupations to the SOC system involved a movement from a mixed system of classification to a system based entirely on work performed and related skills. The SOC system further incorporates structural features that free occupational classification from its previously industry-rooted structure.

In 1965, the then Bureau of the Budget asked 28 agencies about the desirability of establishing a standard occupational classification system for occupations, corresponding to the SIC for industries. It was prompted by a desire to provide more comparability among occupational statistics prepared by Federal agencies and other organizations. Based on responses to this letter, the Bureau appointed an Interagency Occupational Classification Committee to provide recommendations on a new classification system. The committee first met in 1966, and preliminary work was incorporated into the 1970 census. For example, professional, technical, and kindred workers (professional and semiprofessional in the 1940 census was renamed in 1950) were organized into a number of minor groups, replacing the 1960 census alphabetical listing. These minor groups included computer specialists (three computer occupations were created in 1970); teachers, except college; writers, artists, and entertainers; and three health occupation groups. A *Standard Occupational Classification Manual* was published in 1977, and was revised in1980 (in time for the 1980 census) and again in 2000 (for the 2000 census).

The SOC system classifies occupations on the basis of work performed and on required skills, education, training, and credentials, as did the 1940 census system.[27] The 2000 SOC has 23 major groups, which generally correspond to or are disaggregations of 1940-70 census major groups.[28] It provides much more hierarchical structure, with 96 minor occupation groups and more occupations—821. The census professional and technical group was split into eight major groups, corresponding to minor groups in the 1970 census, with some combining and reconfiguration, reflecting the growing number of professional and technical occupations. Service workers were allocated among five major groups, and craftworkers (including construction), extraction workers, mechanics and repairers, and precision production workers, operatives, and laborers were allocated among four major groups.

The 2000 SOC structure is shown in exhibit 2. The SOC also provides an aggregation (intermediate level) of these 23 groups into 11 groups. A comparison of the 23-group and the 11-group categories makes clear how the SOC evolved from the census structure. The intermediate grouping is shown in exhibit 3.

### Response of the classification system to new products, technologies, and other changes

This section discusses classification system responses to three 20th century products or technologies—motor vehicles, airplanes, and computers—and three changes in the methods and organization of production—the growth of science and engineering, the advent of mass production, and the rise of bureaucratic organizations. The character of work has changed at an accelerating rate during the past 100 years. The organization of work in terms of jobs or positions reflects ongoing changes in the structure and nature of capital stocks, progress in the development of technologies, changes in the structure of product and factor markets, and rising levels of education and training. The increasing rate of change in the structure of work in the American economy requires a corresponding increase in the ability of employers to create jobs and positions that utilize the full economic talents of workers and in opportunities for workers to obtain the education and training needed for these jobs and positions.

The development of motor vehicles radically changed transportation. It also gave rise to many new occupations and caused the decline of others. In 1900, there were only 8,000 registered motor vehicles. The first mass-produced car was introduced in 1901, and the first practical vehicles were produced by 1903. Automobile industries developed rapidly thereafter and, by 1910, there were nearly half a million automobile and 10,000 truck registrations. By 1920, there were 8 million automobile and 1.1 million truck registrations. As a result, six motor vehicle-related occupations were added in the 1910 census: two repair-related—garage owners and managers and garage laborers; two automobile factory-related—semiskilled operatives and laborers; retail automobile dealers; and motor vehicle drivers, called chauffeurs. However, attempts to distinguish chauffeurs and other motor vehicle drivers from drivers of vehicles using draft animals—draymen, teamsters, and expressmen; and carriage drivers and hacks—in data collection were not very successful.[29] A seventh occupation—automobile mechanics—appeared in the1910 *Index to Occupations*, but no data were published for it until 1930.[30] Retail dealers, gasoline stations; and laborers and helpers, auto stores and filling stations also appeared in the classification system in 1930, and attendants, filling station and parking lot, were included in 1940.

As the use of motor vehicles spread, employment related to horse-drawn vehicles declined sharply. In the 1930 census, livery stable managers and foremen of livery companies were downgraded to titles within the category of transportation managers and transportation foremen. Draymen and teamsters were combined with carriage drivers in 1930, but the combined occupation (name shortened to Teamsters in 1940) remained an occupation until 1980, when it was downgraded to a single title within the category of miscellaneous material moving equipment operators. Also in 1940, hostlers and stable hands were downgraded to titles in laborers (not elsewhere classified) and operatives in wagon and carriage factories and, in harness and saddle factories, to titles within operatives (not elsewhere classified). In the 1950 census, bus, taxi, and truck drivers were separately enumerated and so, in the 1970 census, were automobile body repairers. The 2000 SOC specified two types of bus drivers and truck drivers, and separated a new specialty—automobile glass installers and repairers—from other body repairers, reflecting the shift of much auto glass work to specialized glass shops.

Aviation industries, although highly visible, developed much more slowly than did automobile industries, and this was reflected in much slower change within the classification system. While the first heavier-than-air flight took place in 1903, scheduled air transportation did not begin until 1926. Aircraft technology and production and air transportation developed during the 1930's and World War II, but air passenger and freight traffic were not significant economic activities until the 1950's.

The occupation of aviators appeared in the 1910 census (as "aeronauts"), classified under showmen, which also included titles such as athletes, balloonists, and performers; in 1920, aviators became a separate occupation. Aircraft mechanics appeared as a title under other mechanics in 1920 and as an occupation in its own right in 1930. Three air transportation industry occupations—proprietors, managers, and officials; foremen and overseers; and laborers—also were added to the job classification in 1930, even though the industry was small. Aircraft manufacturing operatives appeared as a title in 1920 and as an occupation in 1940. Aeronautical engineers, which also appeared as a title in the 1920 census under mechanical engineers, became an occupation in 1950.[31] Airline stewardesses appeared as a title in 1940 under registered nurses, reflecting the requirement that they be nurses, presumably to deal with passengers' discomforts from unpressur-ized cabins and air-sickness. The nursing requirement was soon removed and, in 1950, the title was shifted to the housekeepers and stewards category; in 1970, airline stewardesses became an occupation. Air traffic controllers also appeared in 1940—as airport control operators, a title within radio and wireless operators—and became an occupation in 1970.

Electronic computers, an outgrowth of mechanical and punchcard-based calculators and computers, have given rise to a number of occupations. The first commercial electronic computer was delivered to the Bureau of the Census in 1951.[32] Programming languages soon were introduced, and increased capacities and speed led to the widespread adoption of computers, with continued expansion, including the development of networks, during the 1990's.

Calculating machine operators and tabulating machine operators first appear as titles in the 1920 census within other clerks and, in 1940, within office machine operators. Systems engineers (in SIC 357, office machine manufacturing), first appeared as a title in the 1950 census—not within engineers, but in the category, all other professional and technical workers—and, according to the 1949 Dictionary of Occupational Titles, devised procedures for use of punchcard-based systems. Computer programmers, computer systems analysts, and computer specialists (not elsewhere classified) first appeared as titles in the 1960 census (under professional, technical, and kindred workers, not elsewhere classified) and by 1970, all three were designated as occupations. Computer operators and data processing machine repairmen also were added in 1970. The 2000 SOC lists 12 computer specialists, including computer engineers, computer support specialists, database administrators, network and computer systems administrators, and network systems and data communications analysts, placed in a computer and mathematical science occupations major group.[33]

All engineers appeared in the 1870 census as one occupation. The 1900 census classified a number of engineering branches into three categories: civil; chemical, metallurgical, and mining; and mechanical, electrical, and all other. As employment grew, branches specified in 1900 were separated; in 1940, industrial engineers were added and, in 1950, aeronautical engineers. The 1970 census separated petroleum engineers from mining and, in 1980, nuclear engineers were separated from electrical engineers. The 2000 SOC lists 19 types of engineers, including biomedical and environmental, and classifies engineers in a major occupation group, along with architects and surveyors.[34]

The 1900 census had only one scientific occupation, chemists, assayers, and metallurgists. However, it listed astronomer, bacteriologist, botanist, entomologist, geologist, mathematician, and paleontologist titles under other professional pursuits.[35] Titles were added in following censuses, and these were combined in 1950 into six occupations—agricultural scientists, biological scientists, geologists and geophysicists, mathematicians, physicists, and miscellaneous natural scientists. (Data were not published for these groups until 1960.) The 1970 census added atmospheric and space scientists and marine scientists. The 2000 SOC listed 21 natural scientist occupations, including biochemists and microbiologists, classified into both life scientist and physical scientist minor groups. As science and engineering became more institutionalized, the role of inventors declined. Inventor, a separate occupation since 1900, was downgraded to a title within professional workers (not elsewhere classified) in 1940.

Statisticians became a title (under other professional pursuits) in the 1900 census,[36] as did psychologists in 1920 and economists in 1930; these three, along with miscellaneous social scientists, became occupations in 1950. (Data were not published until 1960.) The 1970 census added political scientists, sociologists, and urban and regional planners, and the 2000 SOC included market research analysts and survey researchers.

By 1900, mass production, using power machinery and characterized by minute division of labor, was replacing handcraft, and semiskilled operatives were replacing craftworkers.

In response, the 1910 census greatly expanded the number of manufacturing industries for which it showed semiskilled operatives (not elsewhere classified). In addition, it downgraded a number of craft occupations, such as broom and brush makers, glovemakers, leather tanners, and tool and cutlery makers, to titles within semiskilled operatives (not elsewhere classified). Later censuses downgraded other occupations, including blacksmiths, coopers, glass blowers, and potters. Some new manufacturing occupations, such as computer-controlled machine-tool operators, fiberglass laminators and fabricators, and team assemblers were added. However, reflecting the relative decline of manufacturing employment, the share of of production occupations among all occupations decreased from more than 2 out of 5 in the 1900 census to about 1 in 6 in the 2000 SOC.

The growth of bureaucratic organizations and specialized administrative activities gave rise to new business and financial operations occupations and their classification as a major occupation group in the 2000 SOC. Accountants and auditors is the only occupation in this group that existed in the 1900 census classification, although there were insurance examiners and adjusters, purchasing agents and buyers, loan agents, and various government inspector titles at that time. Purchasing agents and buyers and inspectors, government were added in 1940 and personnel and labor-relations workers and insurance adjusters, examiners, and investigators, in 1950. In the 1980 census, a management-related occupations minor group, which eventually became the business and financial operations major group in the 2000 SOC, was created. It also included management analysts, underwriters, and other financial officers. The 2000 SOC lists 30 occupations in this group, including 4 personnel and labor relations occupations, cost estimators, financial analysts, and meeting and convention planners.[37]

## The Occupational Employment Survey

Occupational information has always been a component of population data. However, its current economic importance can be traced back to the regional loss of jobs in the 1950s in both the automobile and textile industries. Competition in the auto industry led to the closing, consolidation, or relocation of several Detroit-area automobile manufacturers and to periods of extended unemployment for the workers affected. Similarly, the textile industry in the New England States experienced relocations of major mills to the south. During this period and in response to these situations, the Manpower Development and Training Act of 1962 was enacted, and responsibility for its implementation and administration initially was given to the U.S. Department of Labor's Bureau of Apprenticeship and Training. This act was the progenitor of a series of workforce training acts that have culminated in the current Workforce Investment Act of 1998, administered by the Labor Department's Employment and Training Administration. All of these acts have in common the fact that labor market information at the detailed occupational level is necessary for their proper administration. This information serves to identify areas of demand for workers and requirements for their training. These developments explain the early and continuing efforts of the Bureau of Labor Statistics (BLS) to provide occupational information and statistics to an increasing range and number of users.

Starting in 1959, BLS began collecting information through employer surveys of 18 scientific, engineering, and technical occupations.[38] This experience helped guide a series of pilot studies during the 1960s to test the feasibility of collecting occupational information for a larger number of occupations. In 1968, a comprehensive survey of the metalworking industries was conducted to collect data on 54 clerical and blue-collar occupations. The printing and publishing industry was surveyed in 1970 using a list of 97 occupations. Various tests of mailed structured and unstructured data collection techniques were made during this period, and it was determined that mailed structured techniques including lists of defined occupations were necessary to develop useful and comparable data.

In 1971, the first Occupational Employment Statistics (OES) survey was completed through the cooperation of BLS and 15 participating States, with support from the U.S. Department of Labor's Manpower Administration (the predecessor of the current Employment and Training Administration). During the 1973-76 period, an expanded survey, with data collected by 29 States, was completed. For purposes of completing the national data framework, information for the remaining States was collected by the BLS Washington office. The first national estimates for occupational employment were completed in 1977. The number of occupations included in the survey was 2000 in 1970 and 800 in 1980, reflecting the experience gained by program personnel in collecting useable occupational information.

Throughout the historical development period of the OES survey, the Standard Occupational Classification (SOC) system originated, evolved, and matured into its current form as a skills-based occupational classification system. During the 1970s, the U.S. Office of Management and Budget attempted to have an SOC system incorporated into the1980 census. The 1980 SOC had 664 detailed occupations, compared with the 750 then found in the extant OES classification system. The two systems both were in use (along with several others) until 2001, when the SOC became the governmentwide standard.

Beginning with the 1999 survey, the OES survey questionnaire was converted to reflect the SOC coding system. About 400 of the SOC-based occupations matched to old OES occupations on a one-to-one or many-to-one basis, at least conceptually. The goal of matching the SOC occupations to the old OES occupations was to maximize the number of publishable estimates.

The 1998 OES survey occupational titles and definitions were based on the old OES coding structure and definitions. For the 1999 survey, however, the SOC was the source of the OES occupational titles and definitions. Even for the approximately 400 occupations whose definitions basically matched on a one-to-one or many-to-one basis between the two surveys, there were slight and subtle differences in the occupational titles and definitions that may have affected reporting by the respondents.

### Patterns of change in the OES and SOC occupational classification systems

An ever-present issue in the process of developing and using an occupational classification system to collect employment data is the inherent conflict between collection of data to form a valid and reliable data series and use of a structure that permits and identifies changes in the occupational composition of the employed workforce. A related issue involves validity and reliability of data obtained from supply-side respondents in household surveys versus that obtained from demand-side respondents who are employers. Three problems associated with this issue are the volume, variety, and comparability of responses that identify occupations by as many as 31,000 titles, and possibly even more variations on these.

The range of methodologies for addressing these issues starts, on one hand, with the use of unstructured responses, such as those that the census elicits and that are subsequently placed within a classification structure. At the other extreme are closed classification structures that place choices into a limited number of fixed categories. All structured classification systems include a category of "residuals." The use of a classification that includes "all others" is a way of providing flexibility and realizing economies in collecting data that would otherwise be ignored or forced into an inappropriate classification. The occupational classification systems of the OES are structured systems that include categories of residuals at various levels of detail.

The patterns of change in census occupational categories are known to reflect changing socioeconomic conditions in which the Nation's policymakers and administrators might be interested. The earliest choices of occupations to be surveyed in the OES program were those identified on an industry basis—for example, occupations found in metalworking, printing, and electrometallurgical industries. The early OES surveys were considered to be pretests for the evaluation of survey tools that included structured and unstructured alternatives.

In the first attempts to implement a comprehensive occupational survey, BLS staff used the *Dictionary of Occupational Titles* and other sources to develop lists and definitions of occupations for each industry. These were reviewed by State agencies, the U.S. Manpower Administration (precursor of the U.S. Employment and Training Administration), trade unions, employer associations, and a cross-section of 535 manufacturing firms. Comments and suggestions from these various reviewing sources were incorporated in the job list and definitions. To make the survey tools manageable and to avoid placing unnecessary burdens on employers, occupational lists were tailored to the identified staffing patterns of particular industries. This practice continues today.

The major changes in occupational classifications from the OES system to the SOC system were intended to achieve the following:

(1) Increased emphasis on the business and financial operations that constitute the support for management occupations,

(2) A greater delineation and explication of the professions, including:

- Computer and mathematical occupations
- Architecture and engineering occupations
- Life, physical, and social science occupations
- Community and social services occupations
- Legal occupations
- Education, training, and library occupations,

(3) A more detailed specification of service occupations, including:

- Arts, design, entertainment, sports, and media occupations
- Healthcare support occupations
- Protective service occupations
- Food preparation and serving related occupations
- Building and grounds cleaning and maintenance occupations
- Personal care and service occupations, and

(4) Increased coverage of installation, maintenance, and repair occupations.

The former OES classification system was at its most extensive in 1970, including as many as 2,000 occupations. In 1980, the OES classification system was based on approximately 800 occupations. While a direct cross-walk from the former OES occupations to the SOC detailed occupations is not possible because of the many splits and consolidations of old occupations into new occupations, it is noteworthy that a core of approximately 800 occupations make up the skill-based foundation of the current SOC classification system.

As was the practice in census classifications and in the OES classification, the SOC system retains the use of residual categories at all levels below the major level. This feature permits the coding of new and emerging occupations to be done during the initial data collection. Over time, it also permits the collection of sufficient data on these emerging occupations to justify their explicit, detailed identification at the detailed occupation level of the SOC system.

## Future Directions

One may rightly ask what has been accomplished and where are we going. The answer is that a new framework has been laid for continued development of information, policy, and programs that will ensure continued industrial development and full utilization of the Nation's workforce. It may be difficult to see at this time how such a process-based system for industry information will contribute. But, consider that we are in the midst of an economy with an increasingly important service sector that needs to be nurtured and further developed. Look at the unexplored impacts of recent technology changes and consider our gaining an increased ability to define new production and employment opportunities. Take into account the fact that a dynamically changing economy must be able to offer its citizens education or programs to develop skills needed to enjoy new jobs. Existing workers should have mobility opportunities based on recognition that skills are not tied to a particular industry or job title. These new strengths depend upon developing and using the kinds of information and analyses that can put workers, educators, employers, and various workforce program administrators abreast or ahead of changing conditions. This will not happen overnight. These new systems are now being put into use. They are the right answer for guiding the Nation's economy into Millennium 2000.

While it is too early to point to realized benefits, some gains from the new framework for occupational analysis can be anticipated. First and foremost, more informed policy attention will be directed to changing job conditions, availability, and impacts, in our economy. Intra- and interindustry skill requirements will be better defined; and future education and training programs will contribute to enhanced worker mobility and increased employer willingness to hire outside of traditional industry patterns of requirements. Changes at the industry level will be better accommodated by the increased mobility opportunities of workers. Over the long-term, the role of work in defining socioeconomic status will be diminished in favor of increasing the economic importance of an individual's education and planned acquisition of skills.

Exhibit 1. **NAICS implementation schedule for major statistical programs**

| Program | Data reference year | Publication date |
|---|---|---|
| **CENSUS BUREAU PROGRAMS** | | |
| **1997 Economic Census** | | |
| Advance employment, receipts, and payroll | 1997 | 1999 |
| Comparative Statistics Report | 1997 | January 2000 |
| Bridge Between NAICS and SIC | 1997 | March 2000 |
| **Manufacturing surveys** | | |
| Annual Survey of Manufactures | 1998 | June 2000 |
| Current Industrial Reports | 1998 | 2000 |
| Manufactures Shipments, Inventories, and Unfilled Orders | 2001 | 2001 |
| **Services surveys** | | |
| Annual Trade Survey (wholesale) | 1998–99 | March 2001 |
| Wholesale Trade Monthly | 2001 | 2001 |
| Annual Retail Trade Survey | 1998—99 | April 2001 |
| Retail Trade Monthly | 2001 | 2001 |
| Transportation Annual Survey | 1998—99 | February 2001 |
| Service Annual Survey | 1998—99 | February 2001 |
| **Other programs** | | |
| County Business Patterns | 1998 | March 2000 |
| Quarterly Financial Report | Fourth-quarter 2000 | March 2001 |
| Annual Capital Expenditures Survey | 1999 | February 2001 |
| Manufacturing and Trade Inventory and Sales | 2001 | 2001 |
| Research and Development Survey | 1997—98 | April 2001 |
| **BUREAU OF ECONOMIC ANALYSIS PROGRAMS** | | |
| Foreign Direct Investment Benchmark Survey | 1997 | 1999 |
| U.S. Direct Investment Abroad Benchmark Survey | 1999 | 2001 |
| Annual Foreign Direct Investment Survey | 1998 | 2000 |
| Annual U.S. Direct Investment Abroad Survey | 2000 | 2002 |
| Quarterly Foreign Direct Investment Survey | 2001 | 2001 |
| Quarterly U.S. Direct Investment Abroad Survey | 2002 | 2002 |
| Benchmark Input-Output Accounts | 1997 | 2002 |
| Corporate Profits | 1998 | 2001 |
| State Personal Income | 2000 | 2001 |
| Gross Product Originating by Industry | 2001 | 2002 |
| Real Inventories, Sales, and Inventory-Sales Ratios, Manufacturing and Trade | 2001 | 2002 |
| Gross State Product by Industry | 2001 | 2003 |
| **BUREAU OF LABOR STATISTICS PROGRAMS** | | |
| Employment and Wages Report (annual) | 2000 | 2001 |
| Current Employment Statistics survey (monthly) | 2002 | 2003 |
| Occupational Employment Statistics (annual) | 2002 | 2003 |
| Producer Price Index/1997 Net Output Indexes (monthly) | 1997 | 2004 |

Exhibit 2. **Structure of Standard Occupational Classification (SOC) 2000**

| SOC code | Major group |
|---|---|
| 11-0000 | Management occupations |
| 13-0000 | Business and financial operations occupations |
| 15-0000 | Computer and mathematical occupations |
| 17-0000 | Architecture and engineering occupations |
| 19-0000 | Life, physical, and social science occupations |
| 21-0000 | Community and social services occupations |
| 23-0000 | Legal occupations |
| 25-0000 | Education, training, and library occupations |
| 27-0000 | Arts, design, entertainment, sports, and media occupations |
| 29-0000 | Healthcare practitioner and technical occupations |
| 31-0000 | Healthcare support occupations |
| 33-0000 | Protective service occupations |
| 35-0000 | Food preparation and service related occupations |
| 37-0000 | Building and grounds cleaning and maintenance occupations |
| 39-0000 | Personal care and service occupations |
| 41-0000 | Sales and related occupations |
| 43-0000 | Office and administrative support occupations |
| 45-0000 | Farming, fishing, and forestry occupations |
| 47-0000 | Construction and extraction occupations |
| 49-0000 | Installation, maintenance, and repair occupations |
| 51-0000 | Production occupations |
| 53-0000 | Transportation and material moving occupations |
| 55-0000 | Military-specific occupations |

Exhibit 3. **Intermediate-level Standard Occupational Classification (SOC) grouping**

| SOC code | Intermediate grouping |
|---|---|
| 11-13-000 | Management, business, and financial |
| 15-29-000 | Professional and related |
| 31-39-000 | Service |
| 41-0000 | Sales and related |
| 43-0000 | Office and administrative support |
| 45-0000 | Farming, fishing, and forestry |
| 47-0000 | Construction and extraction |
| 49-0000 | nstallation, maintenance, and repair |
| 51-0000 | Production |
| 53-0000 | Transportation and material moving |
| 55-0000 | Military |

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# Endnotes

[1] Joseph W. Duncan and William C. Shelton, *Revolution in United States Government Statistics 1926-1976* (Washington, U.S. Department of Commerce, October 1978).

[2] For a fascinating discussion of the most critical technological developments of the past century, see Robert J. Gordon, "Does the 'New Economy' Measure Up To the Great Inventions of the Past?" Working Paper 7833 (Cambridge, MA, National Bureau of Economic Research, August 2000).

[3] An interesting history of the economic census program from its inception in 1810 is included in *History of the 1997 Economic Census* (U.S. Census Bureau, July, 2000).

[4] Lawrence F. Schmeckebier, *The Statistical Work of the National Government* (Baltimore, Institute for Government Research, Johns Hopkins Press, 1925).

[5] For good surveys of the history of the Federal statistical system, see Duncan and Shelton, *Revolution in United States Government Statistics 1926-1976*; Joseph P. Goldberg, and William T. Moye, *The First Hundred Years of the Bureau of Labor Statistics* (Washington, U.S. Department of Labor, September 1985); and Richard B. Morris, ed., *U.S. Department of Labor Bicentennial Histroy of the American Worker* (Washington, U.S. Department of Labor, May 1976).

[6] Esther Pearce, "History of the Standard Industrial Classification," unpublished memorandum (Washington, Office of Statistical Standards, Bureau of the Budget, Executive Office of the President, July 10 1957).

[7] For a full background discussion of many of the drawbacks of the SIC, refer to the series of *Issues Papers* published by the Economic Classification Policy Committee: "No. 1: Conceptual Issues," February 1993; "No. 2: Aggregation Structures and Hierarchies," February 1993; "No. 3: Collectibility Issues," May 1993; "No. 4: Criteria for Determining Industries," October 1993; "No. 5: The Impact of Classification Revisions on Time Series," July 1993; and "No. 6: Services Classifications," February 1993.

[8] *North American Industry Classification System* (Washington, U.S. Office of Management and Budget, 1997).

[9] *New Data for a New Economy* ( Washington, Economic Classification Policy Committee, 1997).

[10] See *Standard Occupational Classification Manual, 2000* (Washington, U.S. Office of Management and Budget, 2000); and J.W. Cunningham, Donald W. Drewes, and Thomas Powell, "Framework For A Revised Standard Occupational Classification," Paper presented before the Standard Occupational Classification Revision Policy Committee, Seminar on Research Findings, Apr. 11, 1995, pp. 69 and 91. Tasks generally are specified in employer position descriptions and as part of job titles in the Dictionary of Occupational Titles and the O*NET.

[11] Peter Capelli, "Conceptual Issues in Developing a System for Classifying Occupations," Paper presented before the Standard Occupational Classification Revision Policy Committee, Seminar of Research Findings, Apr. 11, 1995, pp.13-14

[12] Capelli, "Conceptual Issues," p. 8.

[13] Capelli, "Conceptual Issues," p. 10.

[14] Or other differences. For example, psychiatrists, clinical psychologists, mental health social workers, and substance abuse and behavior disorder counselors all have some common job tasks, but each is generally classified with occupations that have similar education backgrounds and licensing. Location or population served may also be factors, for example, to distinguish between elementary, secondary, college and university, and adult education teachers.

[15] James G. Scoville, *The Job Content of the U.S. Economy 1940-70* (New York, McGraw Hill Book Company, 1969), pp. 18-19.

[16] In 1996, the BLS occupational projections program grouped occupations by 13 levels of education and training categories, ranging from professional or doctoral degree to short-term on-the-job training.

[17] Operated by the State employment services. See *Dictionary of Occupational Titles, 4th ed.* (Washington, U.S. Department of Labor, Employment and Training Administration, 1977), pp. ix and xiv.

[18] See, for example, Paulette Meleen and others, *Identifying and Planning for New and Emerging Occupations: A Suggested Guide* Belmont, MA, Contract Research Corporation, 1976.)

[19] During the early years of computers, responsibility for education and training re-

sided almost exclusively with computer manufacturers, who provided it to the staffs of their customers. Educational institutions lacked both expensive computer equipment and the people qualified to teach it.

[20] Trade and transportation industries were split; extraction of minerals and public service, not elsewhere classified (including protective service occupations) became separate industry groups; and clerical occupations, except those related to transportation, were placed in a separate group.

[21] While there is little direct reference to social status in most census publications, a report by Dr. Alba M. Edwards, *Comparative Occupations Statistics for the United States, 1870 to 1940*, pp. 176-77, provides a much more socioeconomic approach. Edwards offers a modified classification to provide a closer approximation to socioeconomic class:

Professional persons

Proprietors, managers, and officials (including farmers)

Clerks and kindred (including sales) workers

Skilled workers and foremen

Semiskilled workers

Unskilled workers, including laborers and servant classes

The service worker categories are eliminated, with household workers included with unskilled workers, police and firemen with skilled workers, and most others with semiskilled workers. The goal was a classification more useful for analyzing social and economic problems.

[22] Clerical and sales were separated in 1950 and transportation equipment operatives were separated from operatives, except transportation, in 1970.

[23] This may be the most heterogeneous group in terms of work function, but the common element in this group is "performs advisory, administrative, or research work which is based upon the established principles of a profession or science... and requires ...training equivalent to that represented by graduation for a college or university...or extensive practical experience." See *Classified Index of Occupations* (Bureau of the Census, 1940), p. 2. This group was renamed professional, technical, and kindred in 1950.

[24] See Population, the Labor Force (sample Statistics) Occupational Characteristics, Table 19, Occupation of Employed Persons by Industry and Sex for the United States, March 1940. It showed 116 occupations for men and 52 for women, by 132 industries.

[25] See *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), pp. 125-26.

[26] The only exceptions were engineers, and mechanics and repairmen.

[27] *Standard Occupational Classification Manual 2000*, p. xii.

[28] The 1980 SOC had 22.

[29] See Alba, *Comparative Statistics*, p. 109, fn. 130.

[30] In 1920, titles such as auto mechanic and auto repairer were placed in an other mechanic category.

[31] Automotive engineers, which also appeared as a title in 1920 under mechanical engineers, never became a separate occupation.

[32] C. Joseph Pusateri, *A History of American Business* (Arlington Heights, IL, Harlan Davidson, Inc., 1984), p. 280.

[33] One of the twelve, computer (hardware) engineers, is classified under engineers and another, computer and information systems managers, under management occupations.

[34] Engineering managers are under management occupations.

[35] No *Classified Index* is available for 1900; these titles are listed in the 1910 *Index*, which is based on the occupations returned at the 1900 census, supplemented with about 400 other occupations added in the 1910 census.

[36] Ibid.

[37] There also was a vast increase in the number of office and administrative support (clerical) occupations between 1900 and 2000.

[38] With support from the National Science Foundation.

# Annex A.

## The first NAICS-based data collection effort

The first look that NAICS users have had at data developed under the new industry classification system is the 1997 Economic Census.[1] Beginning in early 1999 with the *Advance Report*, the U.S. Census Bureau has maintained a demanding schedule that culminated early in 2001 with the full release of the 1997 Economic Census. For the first time, all of the data from this major periodic effort are being released on the Internet to facilitate their dissemination and use. Table A-1 presents a sample of the data, sorted by major NAICS sector.

From any of the industry sectors in table A-1, the analyst can move down to the subsector level. For example, the subsectors underlying the NAICS information sector are presented in table A-2.

Finally, the subsector data can be further subdivided into industry groups (four-digit NAICS) and into international (five-digit) and U.S. (six-digit) industries. Table A-3 shows what the data look like for information subsector 514—information services and data processing services.

**Table A-1. Economic Census summary statistics, 1997**

| NAICS code | Description | Establishments | Sales, receipts, or shipments ($000s) | Annual payroll ($000s) | Paid employees |
|---|---|---|---|---|---|
| 21 | Mining | 25,000 | 173,988,778 | 20,798,257 | 509,006 |
| 22 | Utilities | 15,513 | 411,713,327 | 36,594,684 | 702,703 |
| 23 | Construction | 656,434 | 858,581,046 | 174,184,604 | 5,664,840 |
| 31-33 | Manufacturing | 363,753 | 3,842,061,405 | 572,101,070 | 16,888,016 |
| 42 | Wholesale trade | 453,470 | 4,059,657,778 | 214,915,405 | 5,796,557 |
| 44-45 | Retail trade | 1,118,447 | 2,460,886,012 | 237,195,503 | 13,991,103 |
| 48-49 | Transportation and warehousing | 178,025 | 318,245,044 | 82,346,182 | 2,920,777 |
| 51 | Information | 114,475 | 623,213,854 | 129,481,577 | 3,066,167 |
| 52 | Finance and insurance | 395,203 | 2,197,771,283 | 264,551,401 | 5,835,214 |
| 53 | Real estate and rental and leasing | 288,273 | 240,917,556 | 41,590,766 | 1,702,420 |
| 54 | Professional, scientific, and technical services | 621,129 | 595,250,649 | 231,398,791 | 5,361,210 |
| 55 | Management of companies and enterprises | 47,319 | 92,473,059 | 154,177,673 | 2,617,527 |
| 56 | Administrative support and waste management | 276,393 | 295,936,350 | 137,336,983 | 7,347,366 |
| 61 | Educational services | 40,936 | 20,439,028 | 6,364,527 | 321,073 |
| 62 | Health care and social assistance | 645,853 | 885,054,001 | 378,205,694 | 13,561,579 |
| 71 | Arts, entertainment, and recreation | 99,099 | 104,715,028 | 32,787,273 | 1,587,660 |
| 72 | Accommodation and food services | 545,068 | 350,399,194 | 97,007,396 | 9,451,226 |
| 81 | Other services (except public administration) | 519,715 | 265,897,685 | 65,520,112 | 3,256,178 |
|  | Auxiliaries, excluding corporate, subsidiary, and regional managing | 12,930 | 11,275,968 | 33,114,319 | 792,370 |

All of these data are accompanied by masses of documentation and definitions, SIC-based data for 1992 and 1997, and detailed bridge tables allowing the data user to go backwards and forwards from NAICS to SIC and vice versa. To fully appreciate the breadth and depth of the data associated with the 1997 Economic Census, and to begin to appreciate the many ramifications of the NAICS industry sectoring scheme, the reader should plan on spending significant amounts of time at the Census Bureau Web site pages dedicated both to NAICS (**http://www.census.gov/epcd/www/naics.html**) and to the 1997 Economic Census (**http://www.census.gov/epcd/www/econ97.html**).

[1] *The Economic Census '97—Two Moments of Truth: 1954 and 1997* (Census Bureau, 1998).

**Table A-2. Economic Census, information subsector statistics, 1997**

| NAICS code | Description | Establishments | Sales, receipts, or shipments ($000s) | Annual payroll ($000s) | Paid employees |
|---|---|---|---|---|---|
| 51 | Information | 114,475 | 623,213,854 | 129,481,577 | 3,066,167 |
| 511 | Publishing industries | 33,896 | 179,035,423 | 43,358,072 | 1,006,214 |
| 512 | Motion picture and sound recording industries | 22,204 | 55,925,533 | 9,392,048 | 275,981 |
| 51 | Broadcasting and Telecommunications | 43,480 | 346,315,686 | 63,479,623 | 1,434,455 |
| 514 | Information services and data processing services | 14,895 | 41,937,212 | 13,251,834 | 349,517 |

**Table A-3. Economic Census, information services industry statistics, 1997**

| NAICS code | Description | Establishments | Sales, receipts, or shipments ($000s) | Annual payroll ($000s) | Paid employees |
|---|---|---|---|---|---|
| 514 | Information services and data processing services | 14,895 | 41,937,212 | 13,251,834 | 349,517 |
| 5141 | Information services | 7,307 | 11,100,567 | 3,477,977 | 87,267 |
| 51411 | News syndicates | 527 | 1,402,374 | 465,466 | 9,483 |
| 51412 | Libraries and archives | 2,298 | 860,933 | 373,164 | 22,044 |
| 51419 | Other information services | 4,482 | 8,837,260 | 2,639,347 | 55,740 |
| 514191 | Online information services | 4,165 | 8,042,568 | 2,355,992 | 49,935 |
| 514199 | All other information services | 317 | 794,692 | 283,355 | 5,805 |
| 5142 | Data processing services | 7,588 | 30,836,645 | 9,773,857 | 262,250 |

## Technological Timeline

| | |
|---|---|
| 1900 | Kodak introduces $1 Brownie cameras |
| 1901 | First trans-Atlantic radio signal |
| 1903 | First flight at Kitty Hawk |
| 1907 | First electric washing machine |
| 1913 | Henry Ford creates assembly line |
| 1914 | Panama Canal officially opened |
| 1920 | First commercial radio broadcast aired |
| 1923 | Talking movies invented |
| 1926 | Robert Goddard fires his first liquid-fuel rocket |
| 1927 | Lindbergh flies solo across the Atlantic |
| | Television (TV) invented |
| 1928 | Penicillin discovered |
| 1931 | Empire State Building completed |
| 1932 | Air conditioning invented |
| 1939 | Helicopter invented |
| | Prototype digital computer |
| 1945 | Atomic bomb |
| | First computer built |
| 1947 | Microwave oven invented |
| | Chuck Yeager breaks the sound barrier |
| 1950 | First organ transplant |
| 1951 | Color TV introduced |
| | First commercial computer (UNIVAC I) |
| 1952 | Polio vaccine created |
| 1953 | DNA discovered |
| 1956 | TV remote control invented |
| | Velcro introduced |
| 1957 | Soviet satellite, Sputnik, launches Space Age |
| 1958 | NASA founded |
| 1960 | Lasers invented |
| 1961 | Soviets launch first man in space |
| 1965 | Minicomputer |
| 1967 | First heart transplant |
| 1969 | Astronaut walks on the Moon |
| | ARPANET, the precursor of the Internet, created |
| 1970 | Computer floppy disks introduced |
| | Optical fiber |
| 1971 | Videocassette recorder (VCR) introduced |
| 1972 | Pocket calculators introduced |
| 1974 | Bar Code (UPC) |
| 1976 | Supercomputer |
| 1978 | First test-tube baby born |
| 1979 | Nuclear accident at Three Mile Island |
| 1981 | Personal computer (PC) introduced by IBM |
| 1982 | Artificial heart |
| 1985 | First approval for selling genetically altered organism |
| 1990 | Hubble Telescope launched into space |
| 1993 | Use of the Internet grows exponentially |
| 1994 | Channel Tunnel (Chunnel) opens, connecting Britain and France |
| 1997 | Pathfinder sends back images of Mars |
| | Scientists clone sheep, Dolly |
| 1999 | Fear of Y2K (Year 2000) Bug |

# APPENDIX

## Statistical Tables

The tables in this appendix to the *Report on the American Workforce* are organized along thematic lines, rather than by the program office responsible for collecting them. This extends the ideas suggested In Background Paper No. 22, National Commission on Employment and Unemployment Statistics, "Improving the Presentation of Employment and Unemployment Statistics." Unless noted otherwise, data are from the Bureau of Labor Statistics, U.S. Department of Labor. Technical descriptions of their sources, methods, and limitations are found in *BLS Handbook of Methods*, Bulletin 2490 (1997).

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### Table 1. Selected labor market indicators: Current conditions, annual averages, 1948-2000

| Year | Employment (thousands)[1] | Employment population ratio[1] (percent) | Nonfarm payroll employment (thousands) | Aggregate hours index, private nonfarm (1982=100) | Total hours of nonfarm wage and salary workers (millions) | Goods-producing employment (thousands) | Employment Cost Index, compensation, private nonfarm[2] (June 1989=100) | Unemployment rate[1] percent | Insured unemployment as percent of covered employment[3] |
|---|---|---|---|---|---|---|---|---|---|
| 1948 | 58,343 | 56.6 | 44,866 | – | 92,470 | 18,774 | – | 3.8 | 3.0 |
| 1949 | 57,651 | 55.4 | 43,754 | – | 88,958 | 17,565 | – | 5.9 | 6.2 |
| 1950 | 58,918 | 56.1 | 45,197 | – | 92,514 | 18,506 | – | 5.3 | 4.5 |
| 1951 | 59,961 | 57.3 | 47,819 | – | 98,277 | 19,959 | – | 3.3 | 2.7 |
| 1952 | 60,250 | 57.3 | 48,793 | – | 99,972 | 20,198 | – | 3.0 | 2.8 |
| 1953 | 61,179 | 57.1 | 50,202 | – | 102,361 | 21,074 | – | 2.9 | 2.7 |
| 1954 | 60,109 | 55.5 | 48,990 | – | 98,885 | 19,751 | – | 5.5 | 5.2 |
| 1955 | 62,170 | 56.7 | 50,641 | – | 103,133 | 20,513 | – | 4.4 | 3.4 |
| 1956 | 63,799 | 57.5 | 52,369 | – | 106,031 | 21,104 | – | 4.1 | 3.1 |
| 1957 | 64,071 | 57.1 | 52,855 | – | 105,893 | 20,967 | – | 4.3 | 3.6 |
| 1958 | 63,036 | 55.4 | 51,322 | – | 101,997 | 19,513 | – | 6.8 | 6.5 |
| 1959 | 64,630 | 56.0 | 53,270 | – | 106,774 | 20,411 | – | 5.5 | 4.2 |
| 1960 | 65,778 | 56.1 | 54,189 | – | 108,050 | 20,434 | – | 5.5 | 4.7 |
| 1961 | 65,746 | 55.4 | 53,999 | – | 107,440 | 19,857 | – | 6.7 | 5.7 |
| 1962 | 66,702 | 55.5 | 55,549 | – | 110,966 | 20,451 | – | 5.5 | 4.3 |
| 1963 | 67,762 | 55.4 | 56,653 | – | 113,135 | 20,640 | – | 5.7 | 4.2 |
| 1964 | 69,305 | 55.7 | 58,283 | 75.8 | 116,153 | 21,005 | – | 5.2 | 3.7 |
| 1965 | 71,088 | 56.2 | 60,763 | 79.1 | 121,433 | 21,926 | – | 4.5 | 2.9 |
| 1966 | 72,895 | 56.9 | 63,901 | 82.5 | 127,289 | 23,158 | – | 3.8 | 2.2 |
| 1967 | 74,372 | 57.3 | 65,803 | 82.9 | 129,558 | 23,308 | – | 3.8 | 2.4 |
| 1968 | 75,920 | 57.5 | 67,897 | 84.9 | 132,921 | 23,737 | – | 3.6 | 2.2 |
| 1969 | 77,902 | 58.0 | 70,384 | 87.7 | 137,340 | 24,361 | – | 3.5 | 2.1 |
| 1970 | 78,678 | 57.4 | 70,880 | 86.3 | 136,445 | 23,578 | – | 4.9 | 3.4 |
| 1971 | 79,367 | 56.6 | 71,211 | 85.8 | 136,179 | 22,935 | – | 5.9 | 4.1 |
| 1972 | 82,153 | 57.0 | 73,675 | 89.2 | 141,269 | 23,668 | – | 5.6 | 3.0 |
| 1973 | 85,064 | 57.8 | 76,790 | 93.2 | 147,051 | 24,893 | – | 4.9 | 2.5 |
| 1974 | 86,794 | 57.8 | 78,265 | 93.2 | 148,423 | 24,794 | – | 5.6 | 3.4 |
| 1975 | 85,846 | 56.1 | 76,945 | 88.8 | 144,255 | 22,600 | – | 8.5 | 6.1 |
| 1976 | 88,752 | 56.8 | 79,382 | 92.3 | 149,040 | 23,352 | – | 7.7 | 4.4 |
| 1977 | 92,017 | 57.9 | 82,471 | 96.0 | 154,517 | 24,346 | – | 7.1 | 3.7 |
| 1978 | 96,048 | 59.3 | 86,697 | 100.7 | 162,169 | 25,585 | – | 6.1 | 2.8 |
| 1979 | 98,824 | 59.9 | 89,823 | 104.0 | 167,092 | 26,461 | 59.1 | 5.8 | 2.8 |
| 1980 | 99,303 | 59.2 | 90,406 | 102.8 | 166,885 | 25,658 | 64.8 | 7.1 | 3.9 |
| 1981 | 100,397 | 59.0 | 91,152 | 104.1 | 167,547 | 25,497 | 71.2 | 7.6 | 3.5 |
| 1982 | 99,526 | 57.8 | 89,544 | 100.0 | 163,573 | 23,812 | 75.8 | 9.7 | 4.7 |
| 1983 | 100,834 | 57.9 | 90,152 | 101.5 | 165,612 | 23,330 | 80.1 | 9.6 | 3.9 |
| 1984 | 105,005 | 59.5 | 94,408 | 107.7 | 174,500 | 24,718 | 84.0 | 7.5 | 2.7 |
| 1985 | 107,150 | 60.1 | 97,387 | 110.5 | 179,096 | 24,842 | 87.3 | 7.2 | 2.8 |
| 1986 | 109,597 | 60.7 | 99,344 | 112.3 | 182,067 | 24,533 | 90.1 | 7.0 | 2.8 |
| 1987 | 112,440 | 61.5 | 101,958 | 115.6 | 186,664 | 24,674 | 93.1 | 6.2 | 2.3 |
| 1988 | 114,968 | 62.3 | 105,209 | 119.3 | 192.980 | 25,125 | 97.6 | 5.5 | 2.0 |
| 1989 | 117,342 | 63.0 | 107,884 | 122.1 | 196.775 | 25,254 | 102.3 | 5.3 | 2.1 |
| 1990 | 118,793 | 62.8 | 109,403 | 123.0 | 198.955 | 24,905 | 107.0 | 5.6 | 2.4 |
| 1991 | 117,718 | 61.7 | 108,249 | 120.4 | 196,213 | 23,745 | 111.7 | 6.8 | 3.2 |
| 1992 | 118,492 | 61.5 | 108,601 | 121.2 | 197,378 | 23,231 | 115.6 | 7.5 | 3.1 |
| 1993 | 120,259 | 61.7 | 110,713 | 124.6 | 202,079 | 23,352 | 119.8 | 6.9 | 2.6 |
| 1994 | 123,060 | 62.5 | 114,163 | 130.0 | 208,614 | 23,908 | 123.5 | 6.1 | 2.4 |
| 1995 | 124,900 | 62.9 | 117,191 | 133.5 | 213,443 | 24,265 | 126.7 | 5.6 | 2.3 |
| 1996 | 126,708 | 63.2 | 119,608 | 136.7 | 218,181 | 24,493 | 130.6 | 5.4 | – |
| 1997 | 129,558 | 63.8 | 122,690 | 141.5 | 224,886 | 24,962 | 135.1 | 4.9 | 1.9 |
| 1998 | 131,463 | 64.1 | 125,865 | 145.1 | 230,877 | 25,414 | 139.8 | 4.5 | 1.8 |
| 1999 | 133,488 | 64.3 | 128,916 | 148.2 | 234.919 | 25,507 | 144.6 | 4.2 | 1.8 |
| 2000 | 135,208 | 64.5 | 131,759 | 151.6 | 240.672 | 25,709 | 150.9 | 4.0 | 1.7[p] |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

[2] December.

[3] Data from Employment and Training Administration, U.S. Department of Labor.

Dash indicates data not available.

p=preliminary.

## Table 2. **Selected labor market indicators: Cyclically sensitive conditions, annual averages, 1948-2000**

| Year | Producer Price Index for crude non-food materials, less energy (1982=100) | Manufacturing | | Unemployed[1] | | Nonagricultural workers on part-time schedules for economic reasons, slack work or business conditions[1] (in thousands) |
|---|---|---|---|---|---|---|
| | | Average workweek | Average overtime hours | Less than 5 weeks (in thousands) | Job losers on temporary layoff as percent of civilian labor force | |
| 1948 | – | 40.0 | – | 1,300 | – | – |
| 1949 | – | 39.1 | – | 1,756 | – | – |
| 1950 | – | 40.5 | – | 1,450 | – | – |
| 1951 | – | 40.6 | – | 1,177 | – | – |
| 1952 | – | 40.7 | – | 1,135 | – | – |
| 1953 | – | 40.5 | – | 1,142 | – | – |
| 1954 | – | 39.6 | – | 1,605 | – | – |
| 1955 | – | 40.7 | – | 1,335 | – | 905 |
| 1956 | – | 40.4 | 2.8 | 1,412 | – | 1,013 |
| 1957 | – | 39.8 | 2.3 | 1,408 | – | 1,180 |
| 1958 | – | 39.2 | 2.0 | 1,753 | – | 1,695 |
| 1959 | – | 40.3 | 2.7 | 1,585 | – | 1,078 |
| 1960 | – | 39.7 | 2.5 | 1,719 | – | 1,300 |
| 1961 | – | 39.8 | 2.4 | 1,806 | – | 1,429 |
| 1962 | – | 40.4 | 2.8 | 1,663 | – | 1,077 |
| 1963 | – | 40.5 | 2.8 | 1,751 | – | 1,060 |
| 1964 | – | 40.7 | 3.1 | 1,697 | – | 972 |
| 1965 | – | 41.2 | 3.6 | 1,628 | – | 868 |
| 1966 | – | 41.4 | 3.9 | 1,573 | – | 727 |
| 1967 | – | 40.6 | 3.4 | 1,634 | 0.5 | 979 |
| 1968 | – | 40.7 | 3.6 | 1,594 | .4 | 794 |
| 1969 | – | 40.6 | 3.6 | 1,629 | .4 | 838 |
| 1970 | – | 39.8 | 3.0 | 2,139 | .8 | 1,126 |
| 1971 | – | 39.9 | 2.9 | 2,245 | .9 | 1,245 |
| 1972 | – | 40.5 | 3.5 | 2,242 | .7 | 1,079 |
| 1973 | 70.8 | 40.7 | 3.8 | 2,224 | .5 | 1,067 |
| 1974 | 83.3 | 40.0 | 3.3 | 2,604 | .8 | 1,339 |
| 1975 | 69.3 | 39.5 | 2.6 | 2,940 | 1.8 | 1,925 |
| 1976 | 80.2 | 40.1 | 3.1 | 2,844 | 1.1 | 1,550 |
| 1977 | 79.8 | 40.3 | 3.5 | 2,919 | .9 | 1,472 |
| 1978 | 87.8 | 40.4 | 3.6 | 2,865 | .7 | 1,391 |
| 1979 | 106.2 | 40.2 | 3.3 | 2,950 | .8 | 1,518 |
| 1980 | 113.1 | 39.7 | 2.8 | 3,295 | 1.4 | 2,093 |
| 1981 | 111.7 | 39.8 | 2.8 | 3,449 | 1.3 | 2,251 |
| 1982 | 100.0 | 38.9 | 2.3 | 3,883 | 1.9 | 3,050 |
| 1983 | 105.3 | 40.1 | 3.0 | 3,570 | 1.6 | 2,684 |
| 1984 | 111.7 | 40.7 | 3.4 | 3,350 | 1.0 | 2,291 |
| 1985 | 104.9 | 40.5 | 3.3 | 3,498 | 1.0 | 2,273 |
| 1986 | 103.1 | 40.7 | 3.4 | 3,448 | .9 | 2,305 |
| 1987 | 115.7 | 41.0 | 3.7 | 3,246 | .8 | 2,201 |
| 1988 | 133.0 | 41.1 | 3.9 | 3,084 | .7 | 2,199 |
| 1989 | 137.9 | 41.0 | 3.8 | 3,174 | .7 | 2,143 |
| 1990 | 136.3 | 40.8 | 3.6 | 3,265 | .8 | 2,409 |
| 1991 | 128.2 | 40.7 | 3.6 | 3,480 | 1.0 | 3,059 |
| 1992 | 128.4 | 41.0 | 3.8 | 3,376 | 1.0 | 3,094 |
| 1993 | 140.2 | 41.4 | 4.1 | 3,262 | .9 | 3,033 |
| 1994 | 156.2 | 42.0 | 4.7 | 2,728 | .7 | 2,311 |
| 1995 | 173.6 | 41.6 | 4.4 | 2,700 | .8 | 2,346 |
| 1996 | 155.8 | 41.6 | 4.5 | 2,633 | .8 | 2,263 |
| 1997 | 156.5 | 42.0 | 4.8 | 2,538 | .7 | 2,167 |
| 1998 | 142.1 | 41.7 | 4.6 | 2,622 | .6 | 1,997 |
| 1999 | 135.2 | 41.7 | 4.6 | 2,568 | .6 | 1,861 |
| 2000 | 145.2 | 41.6 | 4.6 | 2,543 | .6 | 1,835 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Dash indicates data not available.

Table 3. **Selected labor market indicators: Processes requiring additional time to complete the cycle, annual averages, 1948-2000**

| Year | Consumer Price Index (CPI-U) for services (1982-84=100) | Unit labor costs business sector (1992=100) | Duration of unemployment (weeks)[1] | |
|---|---|---|---|---|
| | | | Mean | Median |
| 1948 | 15.6 | 22.2 | 8.6 | – |
| 1949 | 16.4 | 22.0 | 10.0 | – |
| 1950 | 16.9 | 21.8 | 12.1 | – |
| 1951 | 17.8 | 23.2 | 9.7 | – |
| 1952 | 18.6 | 23.9 | 8.4 | – |
| 1953 | 19.4 | 24.5 | 8.0 | – |
| 1954 | 20.0 | 24.8 | 11.8 | – |
| 1955 | 20.4 | 24.4 | 13.0 | – |
| 1956 | 20.9 | 26.0 | 11.3 | – |
| 1957 | 21.8 | 26.9 | 10.5 | – |
| 1958 | 22.6 | 27.3 | 13.9 | – |
| 1959 | 23.3 | 27.4 | 14.4 | – |
| 1960 | 24.1 | 28.0 | 12.8 | – |
| 1961 | 24.5 | 28.1 | 15.6 | – |
| 1962 | 25.0 | 28.1 | 14.7 | – |
| 1963 | 25.5 | 28.0 | 14.0 | – |
| 1964 | 26.0 | 28.2 | 13.3 | – |
| 1965 | 26.6 | 28.2 | 11.8 | – |
| 1966 | 27.6 | 28.9 | 10.4 | – |
| 1967 | 28.8 | 29.9 | 8.7 | 2.3 |
| 1968 | 30.3 | 31.3 | 8.4 | 4.5 |
| 1969 | 32.4 | 33.3 | 7.8 | 4.4 |
| 1970 | 35.0 | 35.1 | 8.6 | 4.9 |
| 1971 | 37.0 | 35.8 | 11.3 | 6.3 |
| 1972 | 38.4 | 36.8 | 12.0 | 6.2 |
| 1973 | 40.1 | 38.8 | 10.0 | 5.2 |
| 1974 | 43.8 | 43.2 | 9.8 | 5.2 |
| 1975 | 48.0 | 46.1 | 14.2 | 8.4 |
| 1976 | 52.0 | 48.4 | 15.8 | 8.2 |
| 1977 | 56.0 | 51.4 | 14.3 | 7.0 |
| 1978 | 60.8 | 55.3 | 11.9 | 5.9 |
| 1979 | 67.5 | 60.7 | 10.8 | 5.4 |
| 1980 | 77.9 | 67.4 | 11.9 | 6.5 |
| 1981 | 88.1 | 72.4 | 13.7 | 6.9 |
| 1982 | 96.0 | 78.2 | 15.6 | 8.7 |
| 1983 | 99.4 | 78.6 | 20.0 | 10.1 |
| 1984 | 104.6 | 79.8 | 18.2 | 7.9 |
| 1985 | 109.9 | 82.1 | 15.6 | 6.8 |
| 1986 | 115.4 | 83.9 | 15.0 | 6.9 |
| 1987 | 120.2 | 86.7 | 14.5 | 6.5 |
| 1988 | 125.7 | 89.8 | 13.5 | 5.9 |
| 1989 | 131.9 | 91.3 | 11.9 | 4.8 |
| 1990 | 139.2 | 95.3 | 12.0 | 5.3 |
| 1991 | 146.3 | 98.7 | 13.7 | 6.8 |
| 1992 | 152.0 | 100.0 | 17.7 | 8.7 |
| 1993 | 157.9 | 101.9 | 18.0 | 8.3 |
| 1994 | 163.1 | 102.6 | 18.8 | 9.2 |
| 1995 | 168.7 | 104.1 | 16.6 | 8.3 |
| 1996 | 174.1 | 104.5 | 16.7 | 8.3 |
| 1997 | 179.4 | 105.3 | 15.8 | 8.0 |
| 1998 | 184.2 | 108.0 | 14.5 | 6.7 |
| 1999 | 188.8 | 109.9 | 13.4 | 6.4 |
| 2000 | 195.3 | 110.7 | 12.6 | 5.9 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, monthly periodical published by the Bureau of Labor Statistics.

Dash indicates data not available.

Table 4. **Civilian labor force for selected demographic groups, annual averages, 1948-2000**

(In thousands)

| Year | Total, 16 years and over | Men, 20 years and over | Women, 20 years and over | Both sexes, 16 to 19 years | White | Black and other | Black | Hispanic origin |
|---|---|---|---|---|---|---|---|---|
| 1948 | 60,621 | 40,687 | 15,500 | 4,435 | – | – | – | – |
| 1949 | 61,286 | 41,022 | 15,978 | 4,288 | – | – | – | – |
| 1950 | 62,208 | 41,316 | 16,678 | 4,216 | – | – | – | – |
| 1951 | 62,017 | 40,655 | 17,259 | 4,103 | – | – | – | – |
| 1952 | 62,138 | 40,558 | 17,517 | 4,064 | – | – | – | – |
| 1953[1] | 63,015 | 41,315 | 17,674 | 4,027 | – | – | – | – |
| 1954 | 63,643 | 41,669 | 17,997 | 3,976 | 56,816 | 6,825 | – | |
| 1955 | 65,023 | 42,106 | 18,825 | 4,092 | 58,085 | 6,942 | – | – |
| 1956 | 66,552 | 42,658 | 19,599 | 4,296 | 59,428 | 7,125 | – | – |
| 1957 | 66,929 | 42,780 | 19,873 | 4,275 | 59,754 | 7,174 | – | – |
| 1958 | 67,639 | 43,092 | 20,285 | 4,260 | 60,293 | 7,346 | – | – |
| 1959 | 68,369 | 43,289 | 20,587 | 4,492 | 60,952 | 7,416 | – | – |
| 1960[1] | 69,628 | 43,603 | 21,185 | 4,841 | 61,915 | 7,716 | – | – |
| 1961 | 70,459 | 43,860 | 21,664 | 4,936 | 62,656 | 7,804 | – | – |
| 1962[1] | 70,614 | 43,831 | 21,868 | 4,916 | 62,750 | 7,864 | – | – |
| 1963 | 71,833 | 44,222 | 22,473 | 5,139 | 63,830 | 8,003 | – | – |
| 1964 | 73,091 | 44,604 | 23,098 | 5,388 | 64,921 | 8,170 | – | – |
| 1965 | 74,455 | 44,857 | 23,686 | 5,910 | 66,137 | 8,321 | – | – |
| 1966 | 75,770 | 44,788 | 24,431 | 6,558 | 67,276 | 8,499 | – | – |
| 1967 | 77,347 | 45,354 | 25,475 | 6,521 | 68,699 | 8,649 | – | – |
| 1968 | 78,737 | 45,852 | 26,266 | 6,619 | 69,976 | 8,759 | – | – |
| 1969 | 80,734 | 46,351 | 27,413 | 6,970 | 71,778 | 8,955 | – | – |
| 1970 | 82,771 | 47,220 | 28,301 | 7,249 | 73,556 | 9,218 | – | – |
| 1971 | 84,382 | 48,009 | 28,904 | 7,470 | 74,963 | 9,418 | – | – |
| 1972[1] | 87,034 | 49,079 | 29,901 | 8,054 | 77,275 | 9,761 | 8,707 | – |
| 1973[1] | 89,429 | 49,932 | 30,991 | 8,507 | 79,151 | 10,280 | 8,976 | – |
| 1974 | 91,949 | 50,879 | 32,201 | 8,871 | 81,281 | 10,668 | 9,167 | – |
| 1975 | 93,775 | 51,494 | 33,410 | 8,870 | 82,831 | 10,942 | 9,263 | – |
| 1976 | 96,158 | 52,288 | 34,814 | 9,056 | 84,767 | 11,391 | 9,561 | – |
| 1977 | 99,009 | 53,348 | 36,310 | 9,351 | 87,141 | 11,867 | 9,932 | – |
| 1978[1] | 102,251 | 54,471 | 38,128 | 9,652 | 89,634 | 12,617 | 10,432 | – |
| 1979 | 104,962 | 55,615 | 39,708 | 9,638 | 91,923 | 13,038 | 10,678 | – |
| 1980 | 106,940 | 56,455 | 41,106 | 9,378 | 93,600 | 13,340 | 10,865 | 6,146 |
| 1981 | 108,670 | 57,197 | 42,485 | 8,988 | 95,052 | 13,618 | 11,086 | 6,492 |
| 1982 | 110,204 | 57,980 | 43,699 | 8,526 | 96,143 | 14,061 | 11,331 | 6,734 |
| 1983 | 111,550 | 58,744 | 44,636 | 8,171 | 97,021 | 14,529 | 11,647 | 7,033 |
| 1984 | 113,544 | 59,701 | 45,900 | 7,943 | 98,492 | 15,052 | 12,033 | 7,451 |
| 1985 | 115,461 | 60,277 | 47,283 | 7,901 | 99,926 | 15,535 | 12,364 | 7,698 |
| 1986[1] | 117,834 | 61,320 | 48,589 | 7,926 | 101,801 | 16,034 | 12,654 | 8,076 |
| 1987 | 119,865 | 62,095 | 49,783 | 7,988 | 103,290 | 16,576 | 12,993 | 8,541 |
| 1988 | 121,669 | 62,768 | 50,870 | 8,031 | 104,756 | 16,913 | 13,205 | 8,982 |
| 1989 | 123,869 | 63,704 | 52,212 | 7,954 | 106,355 | 17,514 | 13,497 | 9,323 |
| 1990[1] | 125,840 | 64,916 | 53,131 | 7,792 | 107,447 | 18,393 | 13,740 | 10,720 |
| 1991 | 126,346 | 65,374 | 53,708 | 7,265 | 107,743 | 18,604 | 13,797 | 10,920 |
| 1992 | 128,105 | 66,213 | 54,796 | 7,096 | 108,837 | 19,268 | 14,162 | 11,338 |
| 1993 | 129,200 | 66,642 | 55,388 | 7,170 | 109,700 | 19,500 | 14,225 | 11,610 |
| 1994[1] | 131,056 | 66,921 | 56,655 | 7,481 | 111,082 | 19,974 | 14,502 | 11,975 |
| 1995 | 132,304 | 67,324 | 57,215 | 7,765 | 111,950 | 20,354 | 14,817 | 12,267 |
| 1996 | 133,943 | 68,044 | 58,094 | 7,806 | 113,108 | 20,835 | 15,134 | 12,774 |
| 1997[1] | 136,297 | 69,166 | 59,198 | 7,932 | 114,693 | 21,604 | 15,529 | 13,796 |
| 1998[1] | 137,673 | 69,715 | 59,702 | 8,256 | 115,415 | 22,259 | 15,982 | 14,317 |
| 1999[1] | 139,368 | 70,194 | 60,840 | 8,333 | 116,509 | 22,859 | 16,365 | 14,665 |
| 2000[1] | 140,863 | 70,930 | 61,565 | 8,369 | 117,574 | 23,289 | 16,603 | 15,368 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups. Dash indicates data are not available.

## Table 5. **Civilian labor force participation rates for selected demographic groups, annual averages, 1948-2000**

(Percent)

| Year | Total, 16 years and over | Men, 20 years and over | Women, 20 years and over | Both sexes, 16 to 19 years | White | Black and other | Black | Hispanic origin |
|---|---|---|---|---|---|---|---|---|
| 1948 | 58.8 | 88.6 | 31.8 | 52.5 | – | – | – | – |
| 1949 | 58.9 | 88.5 | 32.3 | 52.2 | – | – | – | – |
| 1950 | 59.2 | 88.4 | 33.3 | 51.8 | – | – | – | – |
| 1951 | 59.2 | 88.2 | 34.0 | 52.2 | – | – | – | |
| 1952 | 59.0 | 88.3 | 34.1 | 51.3 | – | – | – | – |
| 1953[1] | 58.9 | 88.0 | 33.9 | 50.2 | | | | |
| 1954 | 58.8 | 87.8 | 34.2 | 48.3 | 58.2 | 64.0 | – | – |
| 1955 | 59.3 | 87.6 | 35.4 | 48.9 | 58.7 | 64.2 | | |
| 1956 | 60.0 | 87.6 | 36.4 | 50.9 | 59.4 | 64.9 | – | – |
| 1957 | 59.6 | 86.9 | 36.5 | 49.6 | 59.1 | 64.4 | – | – |
| 1958 | 59.5 | 86.6 | 36.9 | 47.4 | 58.9 | 64.8 | – | – |
| 1959 | 59.3 | 86.3 | 37.1 | 46.7 | 58.7 | 64.3 | – | – |
| 1960[1] | 59.4 | 86.0 | 37.6 | 47.5 | 58.8 | 64.5 | – | – |
| 1961 | 59.3 | 85.7 | 38.0 | 46.9 | 58.8 | 64.1 | – | |
| 1962[1] | 58.8 | 84.8 | 37.8 | 46.1 | 58.3 | 63.2 | – | – |
| 1963 | 58.7 | 84.4 | 38.3 | 45.2 | 58.2 | 63.0 | – | – |
| 1964 | 58.7 | 84.2 | 38.9 | 44.5 | 58.2 | 63.1 | – | – |
| 1965 | 58.9 | 83.9 | 39.4 | 45.7 | 58.4 | 62.9 | – | – |
| 1966 | 59.2 | 83.6 | 40.1 | 48.2 | 58.7 | 63.0 | – | – |
| 1967 | 59.6 | 83.4 | 41.1 | 48.4 | 59.2 | 62.8 | – | – |
| 1968 | 59.6 | 83.1 | 41.6 | 48.3 | 59.3 | 62.2 | – | – |
| 1969 | 60.1 | 82.8 | 42.7 | 49.4 | 59.9 | 62.1 | – | – |
| 1970 | 60.4 | 82.6 | 43.3 | 49.9 | 60.2 | 61.8 | – | – |
| 1971 | 60.2 | 82.1 | 43.3 | 49.7 | 60.1 | 60.9 | – | – |
| 1972[1] | 60.4 | 81.6 | 43.7 | 51.9 | 60.4 | 60.2 | 59.9 | – |
| 1973[1] | 60.8 | 81.3 | 44.4 | 53.7 | 60.8 | 60.5 | 60.2 | – |
| 1974 | 61.3 | 81.0 | 45.3 | 54.8 | 61.4 | 60.3 | 59.8 | – |
| 1975 | 61.2 | 80.3 | 46.0 | 54.0 | 61.5 | 59.6 | 58.8 | – |
| 1976 | 61.6 | 79.8 | 47.0 | 54.5 | 61.8 | 59.8 | 59.0 | – |
| 1977 | 62.3 | 79.7 | 48.1 | 56.0 | 62.5 | 60.4 | 59.8 | – |
| 1978[1] | 63.2 | 79.8 | 49.6 | 57.8 | 63.3 | 62.2 | 61.5 | – |
| 1979 | 63.7 | 79.8 | 50.6 | 57.9 | 63.9 | 62.2 | 61.4 | – |
| 1980 | 63.8 | 79.4 | 51.3 | 56.7 | 64.1 | 61.7 | 61.0 | 64.0 |
| 1981 | 63.9 | 79.0 | 52.1 | 55.4 | 64.3 | 61.3 | 60.8 | 64.1 |
| 1982 | 64.0 | 78.7 | 52.7 | 54.1 | 64.3 | 61.6 | 61.0 | 63.6 |
| 1983 | 64.0 | 78.5 | 53.1 | 53.5 | 64.3 | 62.1 | 61.5 | 63.8 |
| 1984 | 64.4 | 78.3 | 53.7 | 53.9 | 64.6 | 62.6 | 62.2 | 64.9 |
| 1985 | 64.8 | 78.1 | 54.7 | 54.5 | 65.0 | 63.3 | 62.9 | 64.6 |
| 1986[1] | 65.3 | 78.1 | 55.5 | 54.7 | 65.5 | 63.7 | 63.3 | 65.4 |
| 1987 | 65.6 | 78.0 | 56.2 | 54.7 | 65.8 | 64.3 | 63.8 | 66.4 |
| 1988 | 65.9 | 77.9 | 56.8 | 55.3 | 66.2 | 64.0 | 63.8 | 67.4 |
| 1989 | 66.5 | 78.1 | 57.7 | 55.9 | 66.7 | 64.7 | 64.2 | 67.6 |
| 1990[1] | 66.5 | 78.2 | 58.0 | 53.7 | 66.9 | 64.4 | 64.0 | 67.4 |
| 1991 | 66.2 | 77.7 | 57.9 | 51.6 | 66.6 | 63.8 | 63.3 | 66.5 |
| 1992 | 66.4 | 77.7 | 58.5 | 51.3 | 66.8 | 64.6 | 63.9 | 66.8 |
| 1993 | 66.3 | 77.3 | 58.5 | 51.5 | 66.8 | 63.8 | 63.2 | 66.2 |
| 1994[1] | 66.6 | 76.8 | 59.3 | 52.7 | 67.1 | 63.9 | 63.4 | 66.1 |
| 1995 | 66.6 | 76.7 | 59.4 | 53.5 | 67.1 | 64.3 | 63.7 | 65.8 |
| 1996 | 66.8 | 76.8 | 59.9 | 52.3 | 67.2 | 64.6 | 64.1 | 66.5 |
| 1997[1] | 67.1 | 77.0 | 60.5 | 51.6 | 67.5 | 65.2 | 64.7 | 67.9 |
| 1998[1] | 67.1 | 76.8 | 60.4 | 52.8 | 67.3 | 66.0 | 65.6 | 67.9 |
| 1999[1] | 67.1 | 76.7 | 60.7 | 52.0 | 67.3 | 65.9 | 65.8 | 67.7 |
| 2000[1] | 67.2 | 76.6 | 60.9 | 52.2 | 67.4 | 66.0 | 65.8 | 68.6 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Dash indicates data not available.

## Table 6. **Labor force participation rates of women by presence and age of children, March 1980-2000**

(Percent)

| Year | Total women | With no children under 18 | With children under 18 | | | | |
|---|---|---|---|---|---|---|---|
| | | | Total | 6 to 17 years | With children under 6 | | |
| | | | | | Total | 3 to 5 years | Under 3 years |
| 1980 | 51.1 | 48.1 | 56.6 | 64.3 | 46.8 | 54.5 | 41.9 |
| 1981 | 52.0 | 48.7 | 58.1 | 65.5 | 48.9 | 56.1 | 44.3 |
| 1982 | 52.1 | 48.6 | 58.5 | 65.8 | 49.9 | 56.5 | 45.6 |
| 1983 | 52.3 | 48.7 | 58.9 | 66.3 | 50.5 | 57.7 | 46.0 |
| 1984 | 53.2 | 49.3 | 60.5 | 68.1 | 52.1 | 58.8 | 47.6 |
| 1985 | 54.5 | 50.4 | 62.1 | 69.9 | 53.5 | 59.5 | 49.5 |
| 1986 | 54.7 | 50.5 | 62.8 | 70.4 | 54.4 | 59.9 | 50.8 |
| 1987 | 55.4 | 50.5 | 64.7 | 72.0 | 56.7 | 62.4 | 52.9 |
| 1988 | 56.0 | 51.2 | 65.1 | 73.3 | 56.1 | 61.5 | 52.4 |
| 1989 | 56.7 | 51.9 | 65.7 | 74.2 | 56.7 | 63.1 | 52.4 |
| 1990 | 57.2 | 52.3 | 66.7 | 74.7 | 58.2 | 65.3 | 53.6 |
| 1991 | 57.0 | 52.0 | 66.6 | 74.4 | 58.4 | 64.4 | 54.5 |
| 1992 | 57.4 | 52.3 | 67.2 | 75.9 | 58.0 | 63.3 | 54.5 |
| 1993 | 57.2 | 52.1 | 66.9 | 75.4 | 57.9 | 63.7 | 53.9 |
| 1994[1] | 58.4 | 53.1 | 68.4 | 76.0 | 60.3 | 64.9 | 57.1 |
| 1995 | 58.7 | 52.9 | 69.7 | 76.4 | 62.3 | 67.1 | 58.7 |
| 1996 | 58.8 | 53.0 | 70.2 | 77.2 | 62.3 | 66.9 | 59.0 |
| 1997[1] | 59.8 | 53.6 | 72.1 | 78.1 | 65.0 | 69.3 | 61.8 |
| 1998[1] | 60.2 | 54.1 | 72.3 | 78.4 | 65.2 | 69.3 | 62.2 |
| 1999[1] | 60.2 | 54.3 | 72.1 | 78.5 | 64.4 | 69.5 | 60.7 |
| 2000[1] | 60.7 | 54.8 | 72.9 | 79.0 | 65.3 | 71.5 | 61.0 |

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[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

NOTE: Data refer to single, married, spouse present, and widowed, divorced, and separated women.

## Table 7. **Percent distribution of the labor force of women by presence and age of children, March 1980-2000**

(Percent)

| Year | Total women | With no children under 18 | With children under 18 | | | | |
|---|---|---|---|---|---|---|---|
| | | | Total | 6 to 17 years | With children under 6 | | |
| | | | | | Total | 3 to 5 years | Under 3 years |
| 1980 | 100.0 | 60.4 | 39.6 | 25.0 | 14.6 | 6.6 | 7.9 |
| 1981 | 100.0 | 60.3 | 39.7 | 24.8 | 14.9 | 6.7 | 8.2 |
| 1982 | 100.0 | 60.2 | 39.8 | 24.2 | 15.6 | 6.9 | 8.8 |
| 1983 | 100.0 | 60.4 | 39.6 | 23.7 | 15.9 | 7.0 | 8.9 |
| 1984 | 100.0 | 60.3 | 39.7 | 23.4 | 16.3 | 7.3 | 8.9 |
| 1985 | 100.0 | 60.6 | 39.4 | 23.2 | 16.1 | 7.1 | 9.0 |
| 1986 | 100.0 | 60.1 | 39.9 | 23.3 | 16.5 | 7.3 | 9.3 |
| 1987 | 100.0 | 59.6 | 40.4 | 23.5 | 17.0 | 7.4 | 9.6 |
| 1988 | 100.0 | 60.1 | 39.9 | 23.5 | 16.4 | 7.2 | 9.2 |
| 1989 | 100.0 | 60.3 | 39.7 | 23.2 | 16.6 | 7.4 | 9.2 |
| 1990 | 100.0 | 60.5 | 39.5 | 22.8 | 16.7 | 7.4 | 9.3 |
| 1991 | 100.0 | 60.4 | 39.6 | 22.5 | 17.1 | 7.5 | 9.6 |
| 1992 | 100.0 | 60.2 | 39.8 | 23.0 | 16.7 | 7.4 | 9.3 |
| 1993 | 100.0 | 59.9 | 40.1 | 23.4 | 16.7 | 7.4 | 9.3 |
| 1994[1] | 100.0 | 59.4 | 40.6 | 23.2 | 17.3 | 7.7 | 9.6 |
| 1995 | 100.0 | 59.2 | 40.8 | 23.6 | 17.2 | 7.8 | 9.3 |
| 1996 | 100.0 | 59.6 | 40.4 | 23.6 | 16.8 | 7.6 | 9.2 |
| 1997[1] | 100.0 | 59.3 | 40.7 | 23.8 | 16.9 | 7.6 | 9.3 |
| 1998[1] | 100.0 | 59.9 | 40.1 | 23.5 | 16.6 | 7.4 | 9.2 |
| 1999[1] | 100.0 | 60.7 | 39.3 | 23.4 | 15.9 | 7.2 | 8.7 |
| 2000[1] | 100.0 | 60.9 | 39.1 | 23.5 | 15.6 | 7.0 | 8.6 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

NOTE: Data refer to single, married, spouse present, and widowed, divorced, and separated women.

Table 8. **Employment for selected demographic groups, annual averages, 1948-2000**

(In thousands)

| Year | Total, 16 years and over | Men, 20 years and over | Women, 20 years and over | Both sexes, 16 to 19 years | White | Black and other | Black | Hispanic origin |
|---|---|---|---|---|---|---|---|---|
| 1948 | 58,343 | 39,382 | 14,936 | 4,026 | – | – | – | – |
| 1949 | 57,651 | 38,803 | 15,137 | 3,712 | – | – | – | – |
| 1950 | 58,918 | 39,394 | 15,824 | 3,703 | – | – | – | – |
| 1951 | 59,961 | 39,626 | 16,570 | 3,767 | – | – | – | – |
| 1952 | 60,250 | 39,578 | 16,958 | 3,719 | – | – | – | – |
| 1953[1] | 61,179 | 40,296 | 17,164 | 3,720 | – | – | – | – |
| 1954 | 60,109 | 39,634 | 17,000 | 3,475 | 53,957 | 6,152 | – | – |
| 1955 | 62,170 | 40,526 | 18,002 | 3,642 | 55,833 | 6,341 | – | – |
| 1956 | 63,799 | 41,216 | 18,767 | 3,818 | 57,269 | 6,534 | – | – |
| 1957 | 64,071 | 41,239 | 19,052 | 3,778 | 57,465 | 6,604 | – | – |
| 1958 | 63,036 | 40,411 | 19,043 | 3,582 | 56,613 | 6,423 | – | – |
| 1959 | 64,630 | 41,267 | 19,524 | 3,838 | 58,006 | 6,623 | – | – |
| 1960[1] | 65,778 | 41,543 | 20,105 | 4,129 | 58,850 | 6,928 | – | – |
| 1961 | 65,746 | 41,342 | 20,296 | 4,108 | 58,913 | 6,833 | – | – |
| 1962[1] | 66,702 | 41,815 | 20,693 | 4,195 | 59,698 | 7,003 | – | – |
| 1963 | 67,762 | 42,251 | 21,257 | 4,255 | 60,622 | 7,140 | – | – |
| 1964 | 69,305 | 42,886 | 21,903 | 4,516 | 61,922 | 7,383 | – | – |
| 1965 | 71,088 | 43,422 | 22,630 | 5,036 | 63,446 | 7,643 | – | – |
| 1966 | 72,895 | 43,668 | 23,510 | 5,721 | 65,021 | 7,877 | – | – |
| 1967 | 74,372 | 44,294 | 24,397 | 5,682 | 66,361 | 8,011 | – | – |
| 1968 | 75,920 | 44,859 | 25,281 | 5,781 | 67,750 | 8,169 | – | – |
| 1969 | 77,902 | 45,388 | 26,397 | 6,117 | 69,518 | 8,384 | – | – |
| 1970 | 78,678 | 45,581 | 26,952 | 6,144 | 70,217 | 8,464 | – | – |
| 1971 | 79,367 | 45,912 | 27,246 | 6,208 | 70,878 | 8,488 | – | – |
| 1972[1] | 82,153 | 47,130 | 28,276 | 6,746 | 73,370 | 8,783 | 7,802 | – |
| 1973[1] | 85,064 | 48,310 | 29,484 | 7,271 | 75,708 | 9,356 | 8,128 | – |
| 1974 | 86,794 | 48,922 | 30,424 | 7,448 | 77,184 | 9,610 | 8,203 | – |
| 1975 | 85,846 | 48,018 | 30,726 | 7,104 | 76,411 | 9,435 | 7,894 | – |
| 1976 | 88,752 | 49,190 | 32,226 | 7,336 | 78,853 | 9,899 | 8,227 | – |
| 1977 | 92,017 | 50,555 | 33,775 | 7,688 | 81,700 | 10,317 | 8,540 | – |
| 1978[1] | 96,048 | 52,143 | 35,836 | 8,070 | 84,936 | 11,112 | 9,102 | – |
| 1979 | 98,824 | 53,308 | 37,434 | 8,083 | 87,259 | 11,565 | 9,359 | – |
| 1980 | 99,303 | 53,101 | 38,492 | 7,710 | 87,715 | 11,588 | 9,313 | 5,527 |
| 1981 | 100,397 | 53,582 | 39,590 | 7,225 | 88,709 | 11,688 | 9,355 | 5,813 |
| 1982 | 99,526 | 52,891 | 40,086 | 6,549 | 87,903 | 11,624 | 9,189 | 5,805 |
| 1983 | 100,834 | 53,487 | 41,004 | 6,342 | 88,893 | 11,941 | 9,375 | 6,072 |
| 1984 | 105,005 | 55,769 | 42,793 | 6,444 | 92,120 | 12,885 | 10,119 | 6,651 |
| 1985 | 107,150 | 56,562 | 44,154 | 6,434 | 93,736 | 13,414 | 10,501 | 6,888 |
| 1986[1] | 109,597 | 57,569 | 45,556 | 6,472 | 95,660 | 13,937 | 10,814 | 7,219 |
| 1987 | 112,440 | 58,726 | 47,074 | 6,640 | 97,789 | 14,652 | 11,309 | 7,790 |
| 1988 | 114,968 | 59,781 | 48,383 | 6,805 | 99,812 | 15,156 | 11,658 | 8,250 |
| 1989 | 117,342 | 60,837 | 49,745 | 6,759 | 101,584 | 15,757 | 11,953 | 8,573 |
| 1990[1] | 118,793 | 61,678 | 50,535 | 6,581 | 102,261 | 16,533 | 12,175 | 9,845 |
| 1991 | 117,718 | 61,178 | 50,634 | 5,906 | 101,182 | 16,536 | 12,074 | 9,828 |
| 1992 | 118,492 | 61,496 | 51,328 | 5,669 | 101,669 | 16,823 | 12,151 | 10,027 |
| 1993 | 120,259 | 62,355 | 52,099 | 5,805 | 103,045 | 17,214 | 12,382 | 10,361 |
| 1994[1] | 123,060 | 63,294 | 53,606 | 6,161 | 105,190 | 17,870 | 12,835 | 10,788 |
| 1995 | 124,900 | 64,085 | 54,396 | 6,419 | 106,490 | 18,409 | 13,279 | 11,127 |
| 1996 | 126,708 | 64,897 | 55,311 | 6,500 | 107,808 | 18,900 | 13,542 | 11,642 |
| 1997[1] | 129,558 | 66,284 | 56,613 | 6,661 | 109,856 | 19,701 | 13,969 | 12,726 |
| 1998[1] | 131,463 | 67,135 | 57,278 | 7,051 | 110,931 | 20,532 | 14,556 | 13,291 |
| 1999[1] | 133,488 | 67,761 | 58,555 | 7,172 | 112,235 | 21,253 | 15,056 | 13,720 |
| 2000[1] | 135,208 | 68,580 | 59,352 | 7,276 | 113,475 | 21,733 | 15,334 | 14,492 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups. Dash indicates data are not available.

## Table 9. **Employment-population ratios for selected demographic groups, annual averages, 1948-2000**

(Percent)

| Year | Total, 16 years and over | Men, 20 years and over | Women, 20 years and over | Both sexes, 16 to 19 years | White | Black and other | Black | Hispanic origin |
|---|---|---|---|---|---|---|---|---|
| 1948 | 56.6 | 85.8 | 30.7 | 47.7 | – | – | – | – |
| 1949 | 55.4 | 83.7 | 30.6 | 45.2 | – | – | – | |
| 1950 | 56.1 | 84.2 | 31.6 | 45.5 | – | – | – | – |
| 1951 | 57.3 | 86.1 | 32.6 | 47.9 | – | – | – | – |
| 1952 | 57.3 | 86.2 | 33.0 | 46.9 | – | – | – | |
| 1953[1] | 57.1 | 85.9 | 32.9 | 46.4 | – | – | – | – |
| 1954 | 55.5 | 83.5 | 32.3 | 42.3 | 55.2 | 58.0 | – | – |
| 1955 | 56.7 | 84.3 | 33.8 | 43.5 | 56.5 | 58.7 | – | – |
| 1956 | 57.5 | 84.6 | 34.9 | 45.3 | 57.3 | 59.5 | – | – |
| 1957 | 57.1 | 83.8 | 35.0 | 43.9 | 56.8 | 59.3 | – | – |
| 1958 | 55.4 | 81.2 | 34.6 | 39.9 | 55.3 | 56.7 | – | – |
| 1959 | 56.0 | 82.3 | 35.1 | 39.9 | 55.9 | 57.5 | – | – |
| 1960[1] | 56.1 | 81.9 | 35.7 | 40.5 | 55.9 | 57.9 | – | – |
| 1961 | 55.4 | 80.8 | 35.6 | 39.1 | 55.3 | 56.2 | – | – |
| 1962[1] | 55.5 | 80.9 | 35.8 | 39.4 | 55.4 | 56.3 | – | – |
| 1963 | 55.4 | 80.6 | 36.3 | 37.4 | 55.3 | 56.2 | – | – |
| 1964 | 55.7 | 80.9 | 36.9 | 37.3 | 55.5 | 57.0 | – | – |
| 1965 | 56.2 | 81.2 | 37.6 | 38.9 | 56.0 | 57.8 | – | – |
| 1966 | 56.9 | 81.5 | 38.6 | 42.1 | 56.8 | 58.4 | – | – |
| 1967 | 57.3 | 81.5 | 39.3 | 42.2 | 57.2 | 58.2 | – | – |
| 1968 | 57.5 | 81.3 | 40.0 | 42.2 | 57.4 | 58.0 | – | – |
| 1969 | 58.0 | 81.1 | 41.1 | 43.4 | 58.0 | 58.1 | – | – |
| 1970 | 57.4 | 79.7 | 41.2 | 42.3 | 57.5 | 56.8 | – | – |
| 1971 | 56.6 | 78.5 | 40.9 | 41.3 | 56.8 | 54.9 | – | – |
| 1972[1] | 57.0 | 78.4 | 41.3 | 43.5 | 57.4 | 54.1 | 53.7 | – |
| 1973[1] | 57.8 | 78.6 | 42.2 | 45.9 | 58.2 | 55.0 | 54.5 | – |
| 1974 | 57.8 | 77.9 | 42.8 | 46.0 | 58.3 | 54.3 | 53.5 | – |
| 1975 | 56.1 | 74.8 | 42.3 | 43.3 | 56.7 | 51.4 | 50.1 | – |
| 1976 | 56.8 | 75.1 | 43.5 | 44.2 | 57.5 | 52.0 | 50.8 | – |
| 1977 | 57.9 | 75.6 | 44.8 | 46.1 | 58.6 | 52.5 | 51.4 | – |
| 1978[1] | 59.3 | 76.4 | 46.6 | 48.3 | 60.0 | 54.7 | 53.6 | – |
| 1979 | 59.9 | 76.5 | 47.7 | 48.5 | 60.6 | 55.2 | 53.8 | – |
| 1980 | 59.2 | 74.6 | 48.1 | 46.6 | 60.0 | 53.6 | 52.3 | 57.6 |
| 1981 | 59.0 | 74.0 | 48.6 | 44.6 | 60.0 | 52.6 | 51.3 | 57.4 |
| 1982 | 57.8 | 71.8 | 48.4 | 41.5 | 58.8 | 50.9 | 49.4 | 54.9 |
| 1983 | 57.9 | 71.4 | 48.8 | 41.5 | 58.9 | 51.0 | 49.5 | 55.1 |
| 1984 | 59.5 | 73.2 | 50.1 | 43.7 | 60.5 | 53.6 | 52.3 | 57.9 |
| 1985 | 60.1 | 73.3 | 51.0 | 44.4 | 61.0 | 54.7 | 53.4 | 57.8 |
| 1986[1] | 60.7 | 73.3 | 52.0 | 44.6 | 61.5 | 55.4 | 54.1 | 58.5 |
| 1987 | 61.5 | 73.8 | 53.1 | 45.5 | 62.3 | 56.8 | 55.6 | 60.5 |
| 1988 | 62.3 | 74.2 | 54.0 | 46.8 | 63.1 | 57.4 | 56.3 | 61.9 |
| 1989 | 63.0 | 74.5 | 54.9 | 47.5 | 63.8 | 58.2 | 56.9 | 62.2 |
| 1990[1] | 62.8 | 74.3 | 55.2 | 45.3 | 63.7 | 57.9 | 56.7 | 61.9 |
| 1991 | 61.7 | 72.7 | 54.6 | 42.0 | 62.6 | 56.7 | 55.4 | 59.8 |
| 1992 | 61.5 | 72.1 | 54.8 | 41.0 | 62.4 | 56.4 | 54.9 | 59.1 |
| 1993 | 61.7 | 72.3 | 55.0 | 41.7 | 62.7 | 56.3 | 55.0 | 59.1 |
| 1994[1] | 62.5 | 72.6 | 56.2 | 43.4 | 63.5 | 57.2 | 56.1 | 59.5 |
| 1995 | 62.9 | 73.0 | 56.5 | 44.2 | 63.8 | 58.1 | 57.1 | 59.7 |
| 1996 | 63.2 | 73.2 | 57.0 | 43.5 | 64.1 | 58.6 | 57.4 | 60.6 |
| 1997[1] | 63.8 | 73.7 | 57.8 | 43.4 | 64.6 | 59.4 | 58.2 | 62.6 |
| 1998[1] | 64.1 | 73.9 | 58.0 | 45.1 | 64.7 | 60.9 | 59.7 | 63.1 |
| 1999[1] | 64.3 | 74.0 | 58.5 | 44.7 | 64.8 | 61.3 | 60.6 | 63.4 |
| 2000[1] | 64.5 | 74.1 | 58.7 | 45.4 | 65.1 | 61.6 | 60.8 | 64.7 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Dash indicates data not available.

Table 10. **Employed persons by major occupation, annual averages, 1987-2000**
(In thousands)

| Occupation | 1987 | 1988 | 1989 | 1990[1] | 1991 | 1992 | 1993 |
|---|---|---|---|---|---|---|---|
| Total | 112,440 | 114,968 | 117,342 | 118,793 | 117,718 | 118,492 | 120,259 |
| Managerial and professional specialty | 27,742 | 29,190 | 30,398 | 30,602 | 30,934 | 31,085 | 32,231 |
| Executive, administrative, and managerial | 13,316 | 14,216 | 14,848 | 14,802 | 14,904 | 14,722 | 15,338 |
| Professional specialty | 14,426 | 14,974 | 15,550 | 15,800 | 16,030 | 16,363 | 16,893 |
| Technical, sales, and administrative support | 35,082 | 35,532 | 36,127 | 36,913 | 36,318 | 37,048 | 37,058 |
| Technicians and related support | 3,346 | 3,521 | 3,645 | 3,866 | 3,814 | 4,277 | 4,039 |
| Sales | 13,480 | 13,747 | 14,065 | 14,285 | 14,052 | 14,014 | 14,342 |
| Administrative support, including clerical | 18,256 | 18,264 | 18,416 | 18,762 | 18,452 | 18,757 | 18,677 |
| Service occupations | 15,054 | 15,332 | 15,556 | 16,012 | 16,254 | 16,377 | 16,821 |
| Private household | 934 | 909 | 872 | 792 | 799 | 891 | 928 |
| Protective service | 1,907 | 1,944 | 1,960 | 2,000 | 2,083 | 2,114 | 2,165 |
| Service, except private household and protective | 12,213 | 12,479 | 12,724 | 13,220 | 13,372 | 13,373 | 13,727 |
| Precision production, craft, and repair | 13,568 | 13,664 | 13,818 | 13,745 | 13,250 | 13,225 | 13,429 |
| Mechanics and repairers | 4,445 | 4,454 | 4,550 | 4,470 | 4,445 | 4,466 | 4,442 |
| Construction trades | 5,011 | 5,098 | 5,142 | 5,199 | 4,852 | 4,827 | 5,048 |
| Other precision production, craft, and repair | 4,112 | 4,112 | 4,126 | 4,076 | 3,953 | 3,931 | 3,939 |
| Operators, fabricators, and laborers | 17,486 | 17,814 | 18,022 | 18,071 | 17,456 | 17,247 | 17,341 |
| Machine operators, assemblers, and inspectors | 7,994 | 8,117 | 8,248 | 8,200 | 7,820 | 7,658 | 7,553 |
| Transportation and material moving occupations | 4,712 | 4,831 | 4,886 | 4,886 | 4,913 | 4,908 | 5,036 |
| Handlers, equipment cleaners, helpers, and laborers | 4,779 | 4,866 | 4,888 | 4,985 | 4,723 | 4,682 | 4,753 |
| Farming, forestry, and fishing | 3,507 | 3,437 | 3,421 | 3,450 | 3,506 | 3,510 | 3,379 |

| Occupation | 1994[1] | 1995 | 1996 | 1997[1] | 1998[1] | 1999[1] | 2000[1] |
|---|---|---|---|---|---|---|---|
| Total | 123,060 | 124,900 | 126,708 | 129,558 | 131,463 | 133,488 | 135,208 |
| Managerial and professional specialty | 33,847 | 35,318 | 36,497 | 37,686 | 38,937 | 40,467 | 40,887 |
| Executive, administrative, and managerial | 16,312 | 17,186 | 17,746 | 18,440 | 19,054 | 19,584 | 19,774 |
| Professional specialty | 17,536 | 18,132 | 18,752 | 19,245 | 19,883 | 20,883 | 21,113 |
| Technical, sales, and administrative support | 37,306 | 37,417 | 37,683 | 38,309 | 38,521 | 38,921 | 39,442 |
| Technicians and related support | 3,869 | 3,909 | 3,926 | 4,214 | 4,261 | 4,355 | 4,385 |
| Sales | 14,817 | 15,119 | 15,404 | 15,734 | 15,850 | 16,118 | 16,340 |
| Administrative support, including clerical | 18,620 | 18,389 | 18,353 | 18,361 | 18,410 | 18,448 | 18,717 |
| Service occupations | 16,912 | 16,930 | 17,177 | 17,537 | 17,836 | 17,915 | 18,278 |
| Private household | 817 | 821 | 804 | 795 | 847 | 831 | 792 |
| Protective service | 2,249 | 2,237 | 2,187 | 2,300 | 2,417 | 2,440 | 2,399 |
| Service, except private household and protective | 13,847 | 13,872 | 14,186 | 14,442 | 14,572 | 14,644 | 15,087 |
| Precision production, craft, and repair | 13,489 | 13,524 | 13,587 | 14,124 | 14,411 | 14,593 | 14,882 |
| Mechanics and repairers | 4,419 | 4,423 | 4,521 | 4,675 | 4,786 | 4,868 | 4,875 |
| Construction trades | 5,008 | 5,098 | 5,108 | 5,378 | 5,594 | 5,801 | 6,120 |
| Other precision production, craft, and repair | 4,062 | 4,004 | 3,959 | 4,071 | 4,031 | 3,923 | 3,887 |
| Operators, fabricators, and laborers | 17,876 | 18,068 | 18,197 | 18,399 | 18,256 | 18,167 | 18,319 |
| Machine operators, assemblers, and inspectors | 7,754 | 7,907 | 7,874 | 7,962 | 7,791 | 7,386 | 7,319 |
| Transportation and material moving occupations | 5,136 | 5,171 | 5,302 | 5,389 | 5,363 | 5,516 | 5,557 |
| Handlers, equipment cleaners, helpers, and laborers | 4,986 | 4,990 | 5,021 | 5,048 | 5,102 | 5,265 | 5,443 |
| Farming, forestry, and fishing | 3,629 | 3,642 | 3,566 | 3,503 | 3,502 | 3,426 | 3,399 |

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[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Table 11. **Employed persons by usual full- or part-time status and sex, annual averages, 1970-2000**

(In thousands)

| Year | Total employed | Full time | Part time | Economic part time[1] |
|---|---|---|---|---|
| **TOTAL** | | | | |
| 1970 | 78,678 | 66,753 | 11,925 | 2,446 |
| 1971 | 79,367 | 66,973 | 12,393 | 2,688 |
| 1972[2] | 82,153 | 69,214 | 12,939 | 2,648 |
| 1973[2] | 85,064 | 71,803 | 13,262 | 2,554 |
| 1974 | 86,794 | 73,093 | 13,701 | 2,988 |
| 1975 | 85,846 | 71,586 | 14,260 | 3,804 |
| 1976 | 88,752 | 73,964 | 14,788 | 3,607 |
| 1977 | 92,017 | 76,625 | 15,391 | 3,608 |
| 1978[2] | 96,048 | 80,193 | 15,855 | 3,516 |
| 1979 | 98,824 | 82,654 | 16,171 | 3,577 |
| 1980 | 99,303 | 82,562 | 16,740 | 4,321 |
| 1981 | 100,397 | 83,243 | 17,154 | 4,768 |
| 1982 | 99,526 | 81,421 | 18,106 | 6,170 |
| 1983 | 100,834 | 82,322 | 18,511 | 6,266 |
| 1984 | 105,005 | 86,544 | 18,462 | 5,744 |
| 1985 | 107,150 | 88,534 | 18,615 | 5,590 |
| 1986[2] | 109,597 | 90,529 | 19,069 | 5,588 |
| 1987 | 112,440 | 92,957 | 19,483 | 5,401 |
| 1988 | 114,968 | 95,214 | 19,754 | 5,206 |
| 1989 | 117,342 | 97,369 | 19,973 | 4,894 |
| 1990[2] | 118,793 | 98,666 | 20,128 | 5,204 |
| 1991 | 117,718 | 97,190 | 20,528 | 6,161 |
| 1992 | 118,492 | 97,664 | 20,828 | 6,520 |
| 1993 | 120,259 | 99,114 | 21,145 | 6,481 |
| 1994[2] | 123,060 | 99,772 | 23,288 | 4,625 |
| 1995 | 124,900 | 101,679 | 23,220 | 4,473 |
| 1996 | 126,708 | 103,537 | 23,170 | 4,315 |
| 1997[2] | 129,558 | 106,334 | 23,224 | 4,068 |
| 1998[2] | 131,463 | 108,202 | 23,261 | 3,665 |
| 1999[2] | 133,488 | 110,302 | 23,186 | 3,357 |
| 2000[2] | 135,208 | 112,291 | 22,917 | 3,190 |
| **Men** | | | | |
| 1970 | 48,990 | 44,825 | 4,166 | 1,298 |
| 1971 | 49,390 | 45,023 | 4,367 | 1,395 |
| 1972[2] | 50,896 | 46,373 | 4,523 | 1,347 |
| 1973[2] | 52,349 | 47,843 | 4,507 | 1,279 |
| 1974 | 53,024 | 48,378 | 4,646 | 1,519 |
| 1975 | 51,857 | 46,988 | 4,870 | 1,973 |
| 1976 | 53,138 | 48,150 | 4,988 | 1,825 |
| 1977 | 54,728 | 49,551 | 5,178 | 1,749 |
| 1978[2] | 56,479 | 51,281 | 5,198 | 1,638 |
| 1979 | 57,607 | 52,427 | 5,180 | 1,645 |
| 1980 | 57,186 | 51,717 | 5,471 | 2,107 |
| 1981 | 57,397 | 51,906 | 5,492 | 2,285 |
| 1982 | 56,271 | 50,334 | 5,937 | 3,030 |
| 1983 | 56,787 | 50,643 | 6,145 | 2,966 |
| 1984 | 59,091 | 53,070 | 6,020 | 2,651 |
| 1985 | 59,891 | 53,862 | 6,028 | 2,572 |
| 1986[2] | 60,892 | 54,685 | 6,207 | 2,590 |
| 1987 | 62,107 | 55,746 | 6,360 | 2,513 |
| 1988 | 63,273 | 56,816 | 6,457 | 2,474 |
| 1989 | 64,315 | 57,885 | 6,430 | 2,287 |
| 1990[2] | 65,104 | 58,501 | 6,604 | 2,519 |
| 1991 | 64,223 | 57,407 | 6,815 | 3,104 |
| 1992 | 64,440 | 57,363 | 7,077 | 3,230 |
| 1993 | 65,349 | 58,123 | 7,226 | 3,124 |
| 1994[2] | 66,450 | 58,832 | 7,617 | 2,299 |
| 1995 | 67,377 | 59,936 | 7,441 | 2,210 |
| 1996 | 68,207 | 60,762 | 7,445 | 2,106 |
| 1997[2] | 69,685 | 62,258 | 7,427 | 1,988 |
| 1998[2] | 70,693 | 63,189 | 7,504 | 1,796 |
| 1999[2] | 71,446 | 63,930 | 7,516 | 1,634 |
| 2000[2] | 72,293 | 64,938 | 7,355 | 1,571 |

See footnotes at end of table.

## Table 11. Employed persons by usual full- and part-time status and sex, annual averages, 1970-2000—Continued

(In thousands)

| Year | Total employed | Full time | Part time | Economic part time[1] |
|---|---|---|---|---|
| **Women** | | | | |
| 1970 | 29,688 | 21,929 | 7,758 | 1,148 |
| 1971 | 29,976 | 21,950 | 8,026 | 1,293 |
| 1972[2] | 31,257 | 22,842 | 8,416 | 1,300 |
| 1973[2] | 32,715 | 23,960 | 8,756 | 1,274 |
| 1974 | 33,769 | 24,714 | 9,055 | 1,468 |
| 1975 | 33,989 | 24,598 | 9,391 | 1,832 |
| 1976 | 35,615 | 25,814 | 9,799 | 1,782 |
| 1977 | 37,289 | 27,076 | 10,213 | 1,859 |
| 1978[2] | 39,569 | 28,912 | 10,658 | 1,879 |
| 1979 | 41,217 | 30,227 | 10,990 | 1,932 |
| 1980 | 42,117 | 30,845 | 11,270 | 2,215 |
| 1981 | 43,000 | 31,337 | 11,664 | 2,484 |
| 1982 | 43,256 | 31,086 | 12,170 | 3,140 |
| 1983 | 44,047 | 31,679 | 12,367 | 3,300 |
| 1984 | 45,915 | 33,473 | 12,441 | 3,091 |
| 1985 | 47,259 | 34,672 | 12,587 | 3,018 |
| 1986[2] | 48,706 | 35,845 | 12,862 | 2,999 |
| 1987 | 50,334 | 37,210 | 13,124 | 2,889 |
| 1988 | 51,696 | 38,398 | 13,298 | 2,733 |
| 1989 | 53,027 | 39,484 | 13,544 | 2,607 |
| 1990[2] | 53,689 | 40,165 | 13,524 | 2,685 |
| 1991 | 53,496 | 39,783 | 13,713 | 3,057 |
| 1992 | 54,052 | 40,301 | 13,751 | 3,290 |
| 1993 | 54,910 | 40,991 | 13,919 | 3,357 |
| 1994[2] | 56,610 | 40,940 | 15,670 | 2,325 |
| 1995 | 57,523 | 41,743 | 15,779 | 2,263 |
| 1996 | 58,501 | 42,776 | 15,725 | 2,210 |
| 1997[2] | 59,873 | 44,076 | 15,797 | 2,080 |
| 1998[2] | 60,771 | 45,014 | 15,757 | 1,869 |
| 1999[2] | 62,042 | 46,372 | 15,670 | 1,723 |
| 2000[2] | 62,915 | 47,353 | 15,562 | 1,619 |

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[1] Includes some persons who usually work full time.

[2] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Table 12. **Employees on nonfarm payrolls by major industry division, annual averages, 1947-2000**

(In thousands)

| Year | Total | Total private | Mining | Construction | Manufacturing | Transportation and public utilities | Wholesale trade | Retail trade | Finance, insurance and, real estate | Services | Government |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 | 43,857 | 38,382 | 955 | 2,009 | 15,545 | 4,166 | 2,478 | 6,477 | 1,728 | 5,025 | 5,474 |
| 1948 | 44,866 | 39,216 | 994 | 2,198 | 15,582 | 4,189 | 2,612 | 6,659 | 1,800 | 5,181 | 5,650 |
| 1949 | 43,754 | 37,897 | 930 | 2,194 | 14,441 | 4,001 | 2,610 | 6,654 | 1,828 | 5,239 | 5,856 |
| 1950 | 45,197 | 39,170 | 901 | 2,364 | 15,241 | 4,034 | 2,643 | 6,743 | 1,888 | 5,356 | 6,026 |
| 1951 | 47,819 | 41,430 | 929 | 2,637 | 16,393 | 4,226 | 2,735 | 7,007 | 1,956 | 5,547 | 6,389 |
| 1952 | 48,793 | 42,185 | 898 | 2,668 | 16,632 | 4,248 | 2,821 | 7,184 | 2,035 | 5,699 | 6,609 |
| 1953 | 50,202 | 43,556 | 866 | 2,659 | 17,549 | 4,290 | 2,862 | 7,385 | 2,111 | 5,835 | 6,645 |
| 1954 | 48,990 | 42,238 | 791 | 2,646 | 16,314 | 4,084 | 2,875 | 7,360 | 2,200 | 5,969 | 6,751 |
| 1955 | 50,641 | 43,727 | 792 | 2,839 | 16,882 | 4,141 | 2,934 | 7,601 | 2,298 | 6,240 | 6,914 |
| 1956 | 52,369 | 45,091 | 822 | 3,039 | 17,243 | 4,244 | 3,027 | 7,831 | 2,389 | 6,497 | 7,278 |
| 1957 | 52,855 | 45,239 | 828 | 2,962 | 17,176 | 4,241 | 3,037 | 7,848 | 2,438 | 6,708 | 7,616 |
| 1958 | 51,322 | 43,483 | 751 | 2,817 | 15,945 | 3,976 | 2,989 | 7,761 | 2,481 | 6,765 | 7,839 |
| 1959 | 53,270 | 45,186 | 732 | 3,004 | 16,675 | 4,011 | 3,092 | 8,035 | 2,549 | 7,087 | 8,083 |
| 1960 | 54,189 | 45,836 | 712 | 2,926 | 16,796 | 4,004 | 3,153 | 8,238 | 2,628 | 7,378 | 8,353 |
| 1961 | 53,999 | 45,404 | 672 | 2,859 | 16,326 | 3,903 | 3,142 | 8,195 | 2,688 | 7,619 | 8,594 |
| 1962 | 55,549 | 46,660 | 650 | 2,948 | 16,853 | 3,906 | 3,207 | 8,359 | 2,754 | 7,982 | 8,890 |
| 1963 | 56,653 | 47,429 | 635 | 3,010 | 16,995 | 3,903 | 3,258 | 8,520 | 2,830 | 8,277 | 9,225 |
| 1964 | 58,283 | 48,686 | 634 | 3,097 | 17,274 | 3,951 | 3,347 | 8,812 | 2,911 | 8,660 | 9,596 |
| 1965 | 60,763 | 50,689 | 632 | 3,232 | 18,062 | 4,036 | 3,477 | 9,239 | 2,977 | 9,036 | 10,074 |
| 1966 | 63,901 | 53,116 | 627 | 3,317 | 19,214 | 4,158 | 3,608 | 9,637 | 3,058 | 9,498 | 10,784 |
| 1967 | 65,803 | 54,413 | 613 | 3,248 | 19,447 | 4,268 | 3,700 | 9,906 | 3,185 | 10,045 | 11,391 |
| 1968 | 67,897 | 56,058 | 606 | 3,350 | 19,781 | 4,318 | 3,791 | 10,308 | 3,337 | 10,567 | 11,839 |
| 1969 | 70,384 | 58,189 | 619 | 3,575 | 20,167 | 4,442 | 3,919 | 10,785 | 3,512 | 11,169 | 12,195 |
| 1970 | 70,880 | 58,325 | 623 | 3,588 | 19,367 | 4,515 | 4,006 | 11,034 | 3,645 | 11,548 | 12,554 |
| 1971 | 71,211 | 58,331 | 609 | 3,704 | 18,623 | 4,476 | 4,014 | 11,338 | 3,772 | 11,797 | 12,881 |
| 1972 | 73,675 | 60,341 | 628 | 3,889 | 19,151 | 4,541 | 4,127 | 11,822 | 3,908 | 12,276 | 13,334 |
| 1973 | 76,790 | 63,058 | 642 | 4,097 | 20,154 | 4,656 | 4,291 | 12,315 | 4,046 | 12,857 | 13,732 |
| 1974 | 78,265 | 64,095 | 697 | 4,020 | 20,077 | 4,725 | 4,447 | 12,539 | 4,148 | 13,441 | 14,170 |
| 1975 | 76,945 | 62,259 | 752 | 3,525 | 18,323 | 4,542 | 4,430 | 12,630 | 4,165 | 13,892 | 14,686 |
| 1976 | 79,382 | 64,511 | 779 | 3,576 | 18,997 | 4,582 | 4,562 | 13,193 | 4,271 | 14,551 | 14,871 |
| 1977 | 82,471 | 67,344 | 813 | 3,851 | 19,682 | 4,713 | 4,723 | 13,792 | 4,467 | 15,302 | 15,127 |
| 1978 | 86,697 | 71,026 | 851 | 4,229 | 20,505 | 4,923 | 4,985 | 14,556 | 4,724 | 16,252 | 15,672 |
| 1979 | 89,823 | 73,876 | 958 | 4,463 | 21,040 | 5,136 | 5,221 | 14,972 | 4,975 | 17,112 | 15,947 |
| 1980 | 90,406 | 74,166 | 1,027 | 4,346 | 20,285 | 5,146 | 5,292 | 15,018 | 5,160 | 17,890 | 16,241 |
| 1981 | 91,152 | 75,121 | 1,139 | 4,188 | 20,170 | 5,165 | 5,375 | 15,171 | 5,298 | 18,615 | 16,031 |
| 1982 | 89,544 | 73,707 | 1,128 | 3,904 | 18,780 | 5,081 | 5,295 | 15,158 | 5,340 | 19,021 | 15,837 |
| 1983 | 90,152 | 74,282 | 952 | 3,946 | 18,432 | 4,952 | 5,283 | 15,587 | 5,466 | 19,664 | 15,869 |
| 1984 | 94,408 | 78,384 | 966 | 4,380 | 19,372 | 5,156 | 5,568 | 16,512 | 5,684 | 20,746 | 16,024 |
| 1985 | 97,387 | 80,992 | 927 | 4,668 | 19,248 | 5,233 | 5,727 | 17,315 | 5,948 | 21,927 | 16,394 |
| 1986 | 99,344 | 82,651 | 777 | 4,810 | 18,947 | 5,247 | 5,761 | 17,880 | 6,273 | 22,957 | 16,693 |
| 1987 | 101,958 | 84,948 | 717 | 4,958 | 18,999 | 5,362 | 5,848 | 18,422 | 6,533 | 24,110 | 17,010 |
| 1988 | 105,209 | 87,823 | 713 | 5,098 | 19,314 | 5,512 | 6,030 | 19,023 | 6,630 | 25,504 | 17,386 |
| 1989 | 107,884 | 90,105 | 692 | 5,171 | 19,391 | 5,614 | 6,187 | 19,475 | 6,668 | 26,907 | 17,779 |
| 1990 | 109,403 | 91,098 | 709 | 5,120 | 19,076 | 5,777 | 6,173 | 19,601 | 6,709 | 27,934 | 18,304 |
| 1991 | 108,249 | 89,847 | 689 | 4,650 | 18,406 | 5,755 | 6,081 | 19,284 | 6,646 | 28,336 | 18,402 |
| 1992 | 108,601 | 89,956 | 635 | 4,492 | 18,104 | 5,718 | 5,997 | 19,356 | 6,602 | 29,052 | 18,645 |
| 1993 | 110,713 | 91,872 | 610 | 4,668 | 18,075 | 5,811 | 5,981 | 19,773 | 6,757 | 30,197 | 18,841 |
| 1994 | 114,163 | 95,036 | 601 | 4,986 | 18,321 | 5,984 | 6,162 | 20,507 | 6,896 | 31,579 | 19,128 |
| 1995 | 117,191 | 97,885 | 581 | 5,160 | 18,524 | 6,132 | 6,378 | 21,187 | 6,806 | 33,117 | 19,305 |
| 1996 | 119,608 | 100,189 | 580 | 5,418 | 18,495 | 6,253 | 6,482 | 21,597 | 6,911 | 34,454 | 19,419 |
| 1997 | 122,690 | 103,133 | 596 | 5,691 | 18,675 | 6,408 | 6,648 | 21,966 | 7,109 | 36,040 | 19,557 |
| 1998 | 125,865 | 106,042 | 590 | 6,020 | 18,805 | 6,611 | 6,800 | 22,295 | 7,389 | 37,533 | 19,823 |
| 1999 | 128,916 | 108,709 | 539 | 6,415 | 18,552 | 6,834 | 6,911 | 22,848 | 7,555 | 39,055 | 20,206 |
| 2000 | 131,759 | 111,079 | 543 | 6,698 | 18,469 | 7,019 | 7,024 | 23,307 | 7,560 | 40,460 | 20,681 |

NOTE: Current estimates are projected from March 2000 benchmark levels.

### Table 13. **Employees on nonfarm payrolls by industry, annual averages, 1992-2000**

(In thousands)

| Industry | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|
| Total nonfarm | 108,601 | 110,713 | 114,163 | 117,191 | 119,608 | 122,690 | 125,865 | 128,916 | 131,759 |
| Total private | 89,956 | 91,872 | 95,036 | 97,885 | 100,189 | 103,133 | 106,042 | 108,709 | 111,079 |
| Goods-producing | 23,231 | 23,352 | 23,908 | 24,265 | 24,493 | 24,962 | 25,414 | 25,507 | 25,709 |
| Mining | 635 | 610 | 601 | 581 | 508 | 596 | 590 | 539 | 543 |
| Metal mining | 53 | 50 | 49 | 51 | 54 | 54 | 49 | 44 | 41 |
| Coal mining | 127 | 109 | 112 | 104 | 98 | 96 | 92 | 85 | 77 |
| Oil and gas extraction | 353 | 350 | 337 | 320 | 322 | 339 | 339 | 297 | 311 |
| Nonmetallic minerals, except fuels | 102 | 102 | 104 | 105 | 106 | 108 | 110 | 113 | 114 |
| Construction | 4,492 | 4,668 | 4,986 | 5,160 | 5,418 | 5,691 | 6,020 | 6,415 | 6,698 |
| General building contractors | 1,077 | 1,120 | 1,188 | 1,207 | 1,257 | 1,310 | 1,377 | 1,458 | 1,528 |
| Heavy construction, except building | 711 | 713 | 740 | 752 | 777 | 799 | 840 | 874 | 901 |
| Special trade contractors | 2,704 | 2,836 | 3,058 | 3,201 | 3,384 | 3,582 | 3,804 | 4,084 | 4,269 |
| Manufacturing | 18,104 | 18,075 | 18,321 | 18,524 | 18,495 | 18,675 | 18,805 | 18,552 | 18,469 |
| Durable goods | 10,277 | 10,221 | 10,448 | 10,683 | 10,789 | 11,010 | 11,205 | 11,111 | 11,138 |
| Lumber and wood products | 680 | 709 | 754 | 769 | 778 | 796 | 814 | 834 | 832 |
| Furniture and fixtures | 478 | 487 | 505 | 510 | 504 | 512 | 533 | 548 | 558 |
| Stone, clay, and glass products | 513 | 517 | 532 | 540 | 544 | 552 | 562 | 566 | 579 |
| Primary metal industries | 695 | 683 | 698 | 712 | 711 | 711 | 715 | 699 | 698 |
| Blast furnaces and basic steel products | 250 | 240 | 239 | 242 | 240 | 235 | 233 | 227 | 225 |
| Fabricated metal products | 1,329 | 1,339 | 1,388 | 1,437 | 1,449 | 1,479 | 1,509 | 1,521 | 1,537 |
| Industrial machinery and equipment | 1,929 | 1,931 | 1,990 | 2,067 | 2,115 | 2,168 | 2,206 | 2,136 | 2,120 |
| Computer and office equipment | 391 | 363 | 354 | 352 | 362 | 376 | 382 | 368 | 361 |
| Electronic and other electrical equipment | 1,528 | 1,526 | 1,571 | 1,625 | 1,661 | 1,689 | 1,707 | 1,672 | 1,719 |
| Electronic components and accessories | 527 | 528 | 544 | 581 | 617 | 650 | 660 | 641 | 682 |
| Transportation equipment | 1,830 | 1,756 | 1,761 | 1,790 | 1,785 | 1,845 | 1,893 | 1,888 | 1,849 |
| Motor vehicles and equipment | 813 | 837 | 909 | 971 | 967 | 986 | 995 | 1,018 | 1,013 |
| Aircraft and parts | 612 | 542 | 482 | 451 | 458 | 501 | 525 | 496 | 465 |
| Instruments and related products | 929 | 896 | 861 | 843 | 855 | 866 | 873 | 855 | 852 |
| Miscellaneous manufacturing industries | 368 | 378 | 389 | 390 | 388 | 392 | 395 | 391 | 394 |
| Nondurable goods | 7,827 | 7,854 | 7,873 | 7,841 | 7,706 | 7,665 | 7,600 | 7,441 | 7,331 |
| Food and kindred products | 1,663 | 1,680 | 1,678 | 1,692 | 1,692 | 1,685 | 1,683 | 1,682 | 1,684 |
| Tobacco products | 48 | 44 | 43 | 42 | 41 | 41 | 41 | 37 | 34 |
| Textile mill products | 674 | 675 | 676 | 663 | 627 | 616 | 598 | 559 | 528 |
| Apparel and other textile products | 1,007 | 989 | 974 | 936 | 868 | 824 | 766 | 690 | 633 |
| Paper and allied products | 690 | 692 | 692 | 693 | 684 | 683 | 677 | 668 | 657 |
| Printing and publishing | 1,507 | 1,517 | 1,537 | 1,546 | 1,540 | 1,552 | 1,565 | 1,552 | 1,547 |
| Chemicals and allied products | 1,084 | 1,081 | 1,057 | 1,038 | 1,034 | 1,036 | 1,043 | 1,035 | 1,038 |
| Petroleum and coal products | 158 | 152 | 149 | 145 | 142 | 141 | 139 | 132 | 127 |
| Rubber and miscellaneous plastics products | 878 | 909 | 953 | 980 | 983 | 996 | 1,005 | 1,009 | 1,011 |
| Leather and leather products | 120 | 117 | 113 | 106 | 96 | 91 | 84 | 77 | 71 |

See note at end of table.

Table 13. **Employees on nonfarm payrolls by industry, annual averages, 1992-2000—Continued**
(In thousands)

| Industry | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|
| Service-producing | 85,370 | 87,361 | 90,256 | 92,925 | 95,115 | 97,727 | 100,451 | 103,409 | 106,050 |
| Transportation and public utilities | 5,718 | 5,811 | 5,984 | 6,132 | 6,253 | 6,408 | 6,611 | 6,834 | 7,019 |
| Transportation | 3,495 | 3,598 | 3,761 | 3,904 | 4,019 | 4,123 | 4,273 | 4,411 | 4,529 |
| Railroad transportation | 254 | 248 | 241 | 238 | 231 | 227 | 231 | 235 | 236 |
| Local and interurban passenger transit | 361 | 379 | 404 | 419 | 437 | 452 | 469 | 478 | 476 |
| Trucking and warehousing | 1,385 | 1,444 | 1,526 | 1,587 | 1,637 | 1,677 | 1,744 | 1,810 | 1,856 |
| Water transportation | 173 | 168 | 172 | 175 | 174 | 179 | 181 | 186 | 196 |
| Transportation by air | 964 | 988 | 1,023 | 1,068 | 1,107 | 1,134 | 1,181 | 1,227 | 1,281 |
| Pipelines, except natural gas | 19 | 18 | 17 | 15 | 15 | 14 | 14 | 13 | 14 |
| Transportation services | 338 | 352 | 378 | 401 | 418 | 441 | 454 | 463 | 471 |
| Communications and public utilities | 2,223 | 2,214 | 2,223 | 2,229 | 2,234 | 2,285 | 2,338 | 2,423 | 2,490 |
| Communications | 1,269 | 1,269 | 1,295 | 1,318 | 1,351 | 1,419 | 1,477 | 1,560 | 1,639 |
| Electric, gas, and sanitary services | 954 | 944 | 928 | 911 | 884 | 866 | 861 | 863 | 851 |
| Wholesale trade | 5,997 | 5,981 | 6,162 | 6,378 | 6,482 | 6,648 | 6,800 | 6,911 | 7,024 |
| Durable goods | 3,446 | 3,433 | 3,559 | 3,715 | 3,805 | 3,927 | 4,043 | 4,117 | 4,193 |
| Nondurable goods | 2,552 | 2,549 | 2,604 | 2,663 | 2,677 | 2,721 | 2,757 | 2,793 | 2,831 |
| Retail trade | 19,356 | 19,773 | 20,507 | 21,187 | 21,597 | 21,966 | 22,295 | 22,848 | 23,307 |
| Building materials and garden supplies | 758 | 779 | 833 | 868 | 894 | 929 | 948 | 988 | 1,016 |
| General merchandise stores | 2,451 | 2,488 | 2,583 | 2,681 | 2,702 | 2,701 | 2,730 | 2,798 | 2,837 |
| Department stores | 2,080 | 2,140 | 2,246 | 2,346 | 2,367 | 2,380 | 2,415 | 2,459 | 2,491 |
| Food stores | 3,180 | 3,224 | 3,291 | 3,366 | 3,436 | 3,478 | 3,484 | 3,497 | 3,521 |
| Automotive dealers and service stations | 1,966 | 2,014 | 2,116 | 2,190 | 2,267 | 2,311 | 2,332 | 2,368 | 2,412 |
| New and used car dealers | 875 | 908 | 963 | 996 | 1,031 | 1,046 | 1,047 | 1,080 | 1,114 |
| Apparel and accessory stores | 1,131 | 1,144 | 1,144 | 1,125 | 1,098 | 1,109 | 1,141 | 1,171 | 1,193 |
| Furniture and home furnishings stores | 800 | 828 | 889 | 946 | 975 | 999 | 1,025 | 1,087 | 1,134 |
| Eating and drinking places | 6,609 | 6,821 | 7,078 | 7,354 | 7,517 | 7,646 | 7,768 | 7,961 | 8,114 |
| Miscellaneous retail establishments | 2,461 | 2,476 | 2,573 | 2,658 | 2,709 | 2,794 | 2,868 | 2,978 | 3,080 |
| Finance, insurance, and real estate | 6,602 | 6,757 | 6,896 | 6,806 | 6,911 | 7,109 | 7,389 | 7,555 | 7,560 |
| Finance | 3,160 | 3,238 | 3,299 | 3,231 | 3,303 | 3,424 | 3,588 | 3,688 | 3,710 |
| Depository institutions | 2,096 | 2,089 | 2,066 | 2,025 | 2,019 | 2,027 | 2,046 | 2,056 | 2,029 |
| Commercial banks | 1,490 | 1,497 | 1,484 | 1,466 | 1,458 | 1,463 | 1,472 | 1,468 | 1,430 |
| Savings institutions | 346 | 324 | 305 | 276 | 266 | 260 | 256 | 254 | 253 |
| Nondepository institutions | 406 | 455 | 491 | 463 | 522 | 577 | 658 | 709 | 681 |
| Mortgage bankers and brokers | 180 | 225 | 249 | 205 | 233 | 263 | 326 | 353 | 309 |
| Security and commodit brokers | 440 | 472 | 516 | 525 | 553 | 596 | 647 | 689 | 748 |
| Holding and other investment offices | 219 | 223 | 227 | 217 | 210 | 223 | 238 | 234 | 251 |
| Insurance | 2,152 | 2,197 | 2,236 | 2,225 | 2,226 | 2,264 | 2,335 | 2,368 | 2,346 |
| Insurance carriers | 1,496 | 1,529 | 1,552 | 1,529 | 1,517 | 1,539 | 1,591 | 1,610 | 1,589 |
| Insurance agents, brokers, and service | 657 | 668 | 684 | 696 | 709 | 725 | 744 | 758 | 757 |
| Real estate | 1,290 | 1,322 | 1,361 | 1,351 | 1,382 | 1,421 | 1,465 | 1,500 | 1,504 |
| Services | 29,052 | 30,197 | 31,579 | 33,117 | 34,454 | 36,040 | 37,533 | 39,055 | 40,460 |
| Agricultural services | 490 | 519 | 564 | 582 | 627 | 678 | 708 | 766 | 801 |
| Hotels and other lodging places | 1,576 | 1,596 | 1,631 | 1,668 | 1,715 | 1,746 | 1,789 | 1,848 | 1,912 |
| Personal services | 1,116 | 1,137 | 1,140 | 1,163 | 1,180 | 1,186 | 1,201 | 1,226 | 1,251 |
| Business services | 5,315 | 5,735 | 6,281 | 6,812 | 7,293 | 7,988 | 8,618 | 9,300 | 9,858 |
| Services to buildings | 805 | 823 | 857 | 882 | 907 | 930 | 950 | 983 | 994 |
| Personnel supply services | 1,629 | 1,906 | 2,272 | 2,476 | 2,654 | 2,985 | 3,278 | 3,616 | 3,887 |
| Help supply services | 1,411 | 1,669 | 2,017 | 2,189 | 2,352 | 2,656 | 2,926 | 3,248 | 3,487 |
| Computer and data processing services | 836 | 893 | 959 | 1,090 | 1,228 | 1,409 | 1,615 | 1,875 | 2,095 |

See note at end of table.

Table 13. **Employees on nonfarm payrolls by industry, annual averages, 1992-2000—Continued**

(In thousands)

| Industry | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|
| Services—Continued | | | | | | | | | |
| Auto repair, services, and parking | 881 | 925 | 968 | 1,020 | 1,080 | 1,120 | 1,145 | 1,196 | 1,248 |
| Miscellaneous repair services | 347 | 349 | 338 | 359 | 372 | 374 | 376 | 372 | 366 |
| Motion pictures | 401 | 412 | 441 | 488 | 525 | 550 | 576 | 599 | 594 |
| Amusement and recreation services | 1,188 | 1,258 | 1,334 | 1,417 | 1,476 | 1,552 | 1,594 | 1,651 | 1,728 |
| Health services | 8,490 | 8,756 | 8,992 | 9,230 | 9,478 | 9,703 | 9,853 | 9,977 | 10,095 |
| Offices and clinics of medical doctors | 1,463 | 1,506 | 1,545 | 1,609 | 1,678 | 1,739 | 1,806 | 1,875 | 1,924 |
| Nursing and personal care facilities | 1,533 | 1,585 | 1,649 | 1,691 | 1,730 | 1,756 | 1,772 | 1,786 | 1,796 |
| Hospitals | 3,750 | 3,779 | 3,763 | 3,772 | 3,812 | 3,860 | 3,930 | 3,974 | 3,990 |
| Home health care services | 398 | 469 | 559 | 629 | 675 | 710 | 666 | 636 | 643 |
| Legal services | 914 | 924 | 924 | 921 | 928 | 944 | 971 | 996 | 1,010 |
| Educational services | 1,678 | 1,711 | 1,850 | 1,965 | 2,030 | 2,104 | 2,178 | 2,267 | 2,325 |
| Social services | 1,959 | 2,070 | 2,200 | 2,336 | 2,413 | 2,518 | 2,646 | 2,783 | 2,903 |
| Child day care services | 451 | 473 | 515 | 563 | 565 | 576 | 621 | 680 | 712 |
| Residential care | 534 | 567 | 604 | 643 | 677 | 716 | 744 | 771 | 806 |
| Museums, botanical and zoological gardens | 73 | 76 | 79 | 80 | 85 | 90 | 94 | 99 | 106 |
| Membership organizations | 1,973 | 2,035 | 2,082 | 2,146 | 2,201 | 2,277 | 2,372 | 2,436 | 2,475 |
| Engineering and management services | 2,471 | 2,521 | 2,579 | 2,731 | 2,844 | 2,988 | 3,139 | 3,256 | 3,419 |
| Engineering and architectural services | 742 | 757 | 778 | 815 | 836 | 865 | 908 | 957 | 1,017 |
| Management and public relations | 655 | 688 | 719 | 805 | 870 | 939 | 1,000 | 1,031 | 1,090 |
| Government | 18,645 | 18,841 | 19,128 | 19,305 | 19,419 | 19,557 | 19,823 | 20,206 | 20,681 |
| Federal | 2,969 | 2,915 | 2,870 | 2,822 | 2,757 | 2,699 | 2,686 | 2,669 | 2,777 |
| Federal, except Postal Service | 2,177 | 2,128 | 2,053 | 1,978 | 1,901 | 1,842 | 1,819 | 1,796 | 1,917 |
| State government | 4,408 | 4,488 | 4,576 | 4,635 | 4,606 | 4,582 | 4,612 | 4,709 | 4,785 |
| State government, except education | 2,610 | 2,654 | 2,694 | 2,715 | 2,695 | 2,678 | 2,690 | 2,726 | 2,753 |
| State government education | 1,799 | 1,834 | 1,882 | 1,919 | 1,911 | 1,904 | 1,922 | 1,983 | 2,032 |
| Local government | 11,267 | 11,438 | 11,682 | 11,849 | 12,056 | 12,276 | 12,525 | 12,829 | 13,119 |
| Local government, except education | 5,048 | 5,085 | 5,203 | 5,243 | 5,308 | 5,357 | 5,440 | 5,540 | 5,679 |
| Local government education | 6,220 | 6,353 | 6,479 | 6,606 | 6,748 | 6,918 | 7,085 | 7,289 | 7,440 |

NOTE: Current estimates are projected from March 2000 benchmark levels.

Table 14. **Average weekly hours of production workers on private nonfarm payrolls by major industry division, annual averages, 1947-2000**

| Year | Total private | Mining | Construction | Manufacturing | Transportation and public utilities | Wholesale trade | Retail trade | Finance, insurance, and real estate | Services |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 40.3 | 40.8 | 38.2 | 40.4 | – | 41.1 | 40.3 | 37.9 | – |
| 1948 | 40.0 | 39.4 | 38.1 | 40.0 | – | 41.0 | 40.2 | 37.9 | – |
| 1949 | 39.4 | 36.3 | 37.7 | 39.1 | – | 40.8 | 40.4 | 37.8 | – |
| 1950 | 39.8 | 37.9 | 37.4 | 40.5 | – | 40.7 | 40.4 | 37.7 | – |
| 1951 | 39.9 | 38.4 | 38.1 | 40.6 | – | 40.8 | 40.4 | 37.7 | – |
| 1952 | 39.9 | 38.6 | 38.9 | 40.7 | – | 40.7 | 39.8 | 37.8 | – |
| 1953 | 39.6 | 38.8 | 37.9 | 40.5 | – | 40.6 | 39.1 | 37.7 | – |
| 1954 | 39.1 | 38.6 | 37.2 | 39.6 | – | 40.5 | 39.2 | 37.6 | – |
| 1955 | 39.6 | 40.7 | 37.1 | 40.7 | – | 40.7 | 39.0 | 37.6 | – |
| 1956 | 39.3 | 40.8 | 37.5 | 40.4 | – | 40.5 | 38.6 | 36.9 | – |
| 1957 | 38.8 | 40.1 | 37.0 | 39.8 | – | 40.3 | 38.1 | 36.7 | – |
| 1958 | 38.5 | 38.9 | 36.8 | 39.2 | – | 40.2 | 38.1 | 37.1 | – |
| 1959 | 39.0 | 40.5 | 37.0 | 40.3 | – | 40.6 | 38.2 | 37.3 | – |
| 1960 | 38.6 | 40.4 | 36.7 | 39.7 | – | 40.5 | 38.0 | 37.2 | – |
| 1961 | 38.6 | 40.5 | 36.9 | 39.8 | – | 40.5 | 37.6 | 36.9 | – |
| 1962 | 38.7 | 41.0 | 37.0 | 40.4 | – | 40.6 | 37.4 | 37.3 | – |
| 1963 | 38.8 | 41.6 | 37.3 | 40.5 | – | 40.6 | 37.3 | 37.5 | – |
| 1964 | 38.7 | 41.9 | 37.2 | 40.7 | 41.1 | 40.7 | 37.0 | 37.3 | 36.1 |
| 1965 | 38.8 | 42.3 | 37.4 | 41.2 | 41.3 | 40.8 | 36.6 | 37.2 | 35.9 |
| 1966 | 38.6 | 42.7 | 37.6 | 41.4 | 41.2 | 40.7 | 35.9 | 37.3 | 35.5 |
| 1967 | 38.0 | 42.6 | 37.7 | 40.6 | 40.5 | 40.3 | 35.3 | 37.1 | 35.1 |
| 1968 | 37.8 | 42.6 | 37.3 | 40.7 | 40.6 | 40.1 | 34.7 | 37.0 | 34.7 |
| 1969 | 37.7 | 43.0 | 37.9 | 40.6 | 40.7 | 40.2 | 34.2 | 37.1 | 34.7 |
| 1970 | 37.1 | 42.7 | 37.3 | 39.8 | 40.5 | 39.9 | 33.8 | 36.7 | 34.4 |
| 1971 | 36.9 | 42.4 | 37.2 | 39.9 | 40.1 | 39.4 | 33.7 | 36.6 | 33.9 |
| 1972 | 37.0 | 42.6 | 36.5 | 40.5 | 40.4 | 39.4 | 33.4 | 36.6 | 33.9 |
| 1973 | 36.9 | 42.4 | 36.8 | 40.7 | 40.5 | 39.2 | 33.1 | 36.6 | 33.8 |
| 1974 | 36.5 | 41.9 | 36.6 | 40.0 | 40.2 | 38.8 | 32.7 | 36.5 | 33.6 |
| 1975 | 36.1 | 41.9 | 36.4 | 39.5 | 39.7 | 38.6 | 32.4 | 36.5 | 33.5 |
| 1976 | 36.1 | 42.4 | 36.8 | 40.1 | 39.8 | 38.7 | 32.1 | 36.4 | 33.3 |
| 1977 | 36.0 | 43.4 | 36.5 | 40.3 | 39.9 | 38.8 | 31.6 | 36.4 | 33.0 |
| 1978 | 35.8 | 43.4 | 36.8 | 40.4 | 40.0 | 38.8 | 31.0 | 36.4 | 32.8 |
| 1979 | 35.7 | 43.0 | 37.0 | 40.2 | 39.9 | 38.8 | 30.6 | 36.2 | 32.7 |
| 1980 | 35.3 | 43.3 | 37.0 | 39.7 | 39.6 | 38.4 | 30.2 | 36.2 | 32.6 |
| 1981 | 35.2 | 43.7 | 36.9 | 39.8 | 39.4 | 38.5 | 30.1 | 36.3 | 32.6 |
| 1982 | 34.8 | 42.7 | 36.7 | 38.9 | 39.0 | 38.3 | 29.9 | 36.2 | 32.6 |
| 1983 | 35.0 | 42.5 | 37.1 | 40.1 | 39.0 | 38.5 | 29.8 | 36.2 | 32.7 |
| 1984 | 35.2 | 43.3 | 37.8 | 40.7 | 39.4 | 38.5 | 29.8 | 36.5 | 32.6 |
| 1985 | 34.9 | 43.4 | 37.7 | 40.5 | 39.5 | 38.4 | 29.4 | 36.4 | 32.5 |
| 1986 | 34.8 | 42.2 | 37.4 | 40.7 | 39.2 | 38.3 | 29.2 | 36.4 | 32.5 |
| 1987 | 34.8 | 42.4 | 37.8 | 41.0 | 39.2 | 38.1 | 29.2 | 36.3 | 32.5 |
| 1988 | 34.7 | 42.3 | 37.9 | 41.1 | 38.2 | 38.1 | 29.1 | 35.9 | 32.6 |
| 1989 | 34.6 | 43.0 | 37.9 | 41.0 | 38.3 | 38.0 | 28.9 | 35.8 | 32.6 |
| 1990 | 34.5 | 44.1 | 38.2 | 40.8 | 38.4 | 38.1 | 28.8 | 35.8 | 32.5 |
| 1991 | 34.3 | 44.4 | 38.1 | 40.7 | 38.1 | 38.1 | 28.6 | 35.7 | 32.4 |
| 1992 | 34.4 | 43.9 | 38.0 | 41.0 | 38.3 | 38.2 | 28.8 | 35.8 | 32.5 |
| 1993 | 34.5 | 44.3 | 38.5 | 41.4 | 39.3 | 38.2 | 28.8 | 35.8 | 32.5 |
| 1994 | 34.7 | 44.8 | 38.9 | 42.0 | 39.7 | 38.4 | 28.9 | 35.8 | 32.5 |
| 1995 | 34.5 | 44.7 | 38.9 | 41.6 | 39.4 | 38.3 | 28.8 | 35.9 | 32.4 |
| 1996 | 34.4 | 45.3 | 39.0 | 41.6 | 39.6 | 38.3 | 28.8 | 35.9 | 32.4 |
| 1997 | 34.6 | 45.4 | 39.0 | 42.0 | 39.7 | 38.4 | 28.9 | 36.1 | 32.6 |
| 1998 | 34.6 | 43.9 | 38.9 | 41.7 | 39.5 | 38.3 | 29.0 | 36.4 | 32.6 |
| 1999 | 34.5 | 43.2 | 39.1 | 41.7 | 38.7 | 38.3 | 29.0 | 36.2 | 32.6 |
| 2000 | 34.5 | 43.1 | 39.3 | 41.6 | 38.6 | 38.5 | 28.9 | 36.3 | 32.7 |

Dash indicates data not available.

NOTE: Current estimates are projected from March 2000 benchmark levels.

## Table 15. **Indexes of aggregate weekly hours of production workers on private nonfarm payrolls by major industry division, annual averages, 1947-2000**

(1982=100)

| Year | Total private | Mining | Construction | Manufacturing | Transportation and public utilities | Wholesale trade | Retail trade | Finance, insurance, and real estate | Services |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | – | 101.4 | 62.0 | 105.8 | – | 56.8 | – | – | – |
| 1948 | – | 101.9 | 67.6 | 104.2 | – | 59.5 | – | – | – |
| 1949 | – | 86.8 | 66.7 | 93.0 | – | 59.0 | – | – | – |
| 1950 | – | 88.3 | 71.3 | 102.2 | – | 59.7 | – | – | – |
| 1951 | – | 91.9 | 81.0 | 109.6 | – | 61.7 | – | – | – |
| 1952 | – | 88.2 | 83.3 | 109.6 | – | 63.3 | – | – | – |
| 1953 | – | 84.8 | 80.5 | 114.8 | – | 63.7 | – | – | – |
| 1954 | – | 75.5 | 78.2 | 102.4 | – | 63.1 | – | – | – |
| 1955 | – | 78.9 | 83.4 | 109.0 | – | 64.4 | – | – | – |
| 1956 | – | 81.5 | 90.2 | 109.5 | – | 65.9 | – | – | – |
| 1957 | – | 79.6 | 86.6 | 105.9 | – | 65.4 | – | – | – |
| 1958 | – | 67.9 | 80.8 | 94.8 | – | 63.6 | – | – | – |
| 1959 | – | 68.1 | 86.7 | 102.3 | – | 66.4 | – | – |  |
| 1960 | – | 65.7 | 83.2 | 100.7 | – | 67.3 | – | – | – |
| 1961 | – | 61.5 | 81.4 | 97.0 | – | 66.8 | – | – | – |
| 1962 | – | 59.8 | 83.9 | 101.6 | – | 68.1 | – | – | – |
| 1963 | – | 59.1 | 86.8 | 102.4 | – | 68.8 | – | – | – |
| 1964 | 75.8 | 59.4 | 89.1 | 104.9 | 87.7 | 70.6 | 73.2 | 60.4 | 51.9 |
| 1965 | 79.1 | 59.6 | 93.4 | 111.5 | 89.9 | 73.3 | 75.9 | 61.4 | 54.0 |
| 1966 | 82.5 | 59.3 | 96.3 | 119.2 | 91.7 | 75.7 | 77.6 | 62.8 | 56.4 |
| 1967 | 82.9 | 57.0 | 93.8 | 117.1 | 92.1 | 76.5 | 78.3 | 64.8 | 58.9 |
| 1968 | 84.9 | 56.0 | 95.6 | 119.2 | 93.4 | 77.7 | 80.1 | 67.8 | 61.3 |
| 1969 | 87.7 | 57.9 | 103.6 | 121.0 | 96.3 | 80.6 | 82.6 | 71.6 | 64.2 |
| 1970 | 86.3 | 57.6 | 101.3 | 112.8 | 96.9 | 81.7 | 83.4 | 73.0 | 65.3 |
| 1971 | 85.8 | 54.9 | 103.6 | 108.8 | 95.1 | 80.4 | 85.3 | 74.3 | 65.6 |
| 1972 | 89.2 | 57.8 | 107.9 | 114.8 | 97.3 | 82.5 | 88.2 | 76.5 | 68.0 |
| 1973 | 93.2 | 58.8 | 113.7 | 121.7 | 99.9 | 85.6 | 90.9 | 78.9 | 71.3 |
| 1974 | 93.2 | 63.4 | 109.5 | 118.1 | 100.4 | 87.6 | 91.0 | 79.8 | 73.9 |
| 1975 | 88.8 | 68.3 | 92.7 | 103.8 | 94.6 | 86.4 | 90.6 | 79.9 | 76.0 |
| 1976 | 92.3 | 71.5 | 94.0 | 110.3 | 95.5 | 89.1 | 93.9 | 81.5 | 78.8 |
| 1977 | 96.0 | 76.5 | 100.2 | 115.0 | 97.9 | 92.5 | 96.5 | 85.4 | 82.0 |
| 1978 | 100.7 | 79.0 | 112.2 | 120.1 | 101.3 | 97.7 | 100.0 | 90.3 | 86.3 |
| 1979 | 104.0 | 88.2 | 119.9 | 122.1 | 104.9 | 102.0 | 101.5 | 94.4 | 90.2 |
| 1980 | 102.8 | 94.1 | 115.1 | 113.8 | 104.1 | 101.9 | 100.1 | 97.8 | 94.3 |
| 1981 | 104.1 | 104.8 | 109.3 | 112.5 | 103.3 | 103.3 | 100.6 | 105.5 | 98.2 |
| 1982 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1983 | 101.5 | 81.5 | 102.2 | 101.4 | 97.3 | 99.9 | 102.7 | 101.6 | 103.6 |
| 1984 | 107.7 | 84.9 | 116.8 | 109.0 | 102.8 | 105.3 | 108.2 | 106.4 | 108.2 |
| 1985 | 110.5 | 81.4 | 125.3 | 106.9 | 104.6 | 108.4 | 111.7 | 110.9 | 114.0 |
| 1986 | 112.3 | 65.7 | 128.2 | 105.7 | 104.0 | 108.5 | 114.3 | 116.7 | 119.2 |
| 1987 | 115.6 | 61.8 | 132.7 | 107.0 | 106.5 | 109.4 | 117.9 | 120.1 | 124.9 |
| 1988 | 119.3 | 61.7 | 136.9 | 109.3 | 108.2 | 113.3 | 121.0 | 119.2 | 132.2 |
| 1989 | 122.1 | 60.5 | 138.9 | 109.3 | 111.1 | 116.1 | 122.9 | 119.5 | 139.3 |
| 1990 | 123.0 | 63.9 | 138.0 | 106.4 | 114.5 | 115.7 | 123.0 | 120.2 | 144.2 |
| 1991 | 120.4 | 62.0 | 122.8 | 102.1 | 113.4 | 113.7 | 119.5 | 118.3 | 145.3 |
| 1992 | 121.2 | 56.2 | 118.4 | 101.7 | 113.6 | 112.8 | 120.6 | 118.1 | 149.3 |
| 1993 | 124.6 | 54.3 | 125.4 | 103.1 | 118.2 | 112.8 | 123.4 | 121.2 | 155.4 |
| 1994 | 130.0 | 54.6 | 136.4 | 107.0 | 121.8 | 116.9 | 128.6 | 124.0 | 163.1 |
| 1995 | 133.5 | 54.1 | 140.9 | 107.5 | 123.9 | 121.1 | 132.2 | 122.9 | 120.7 |
| 1996 | 136.7 | 55.6 | 148.7 | 107.2 | 127.5 | 122.9 | 134.6 | 125.0 | 177.4 |
| 1997 | 141.5 | 58.3 | 156.2 | 109.4 | 130.5 | 126.1 | 137.7 | 129.6 | 186.6 |
| 1998 | 145.1 | 56.0 | 164.7 | 109.0 | 132.3 | 127.9 | 140.0 | 136.3 | 194.2 |
| 1999 | 148.2 | 50.1 | 176.1 | 107.2 | 134.3 | 129.6 | 143.5 | 138.4 | 201.5 |
| 2000 | 151.6 | 51.3 | 184.8 | 105.9 | 137.9 | 132.0 | 146.1 | 138.5 | 209.6 |

Dash indicates data not available.

NOTE: Current estimates are projected from March 2000 benchmark levels.

Table 16. **Percent distribution of all hours worked by women in the private business sector by years of completed schooling, 1948-99**

| Year | Years of completed schooling | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0-4 | 5-8 | 9-11 | 12 | 13-15 | 16 | 17+ |
| 1948 | 4.8 | 29.5 | 18.8 | 36.3 | 6.8 | 2.5 | 1.3 |
| 1949 | 4.5 | 25.4 | 20.5 | 35.5 | 9.2 | 3.2 | 1.6 |
| 1950 | 4.5 | 25.4 | 20.3 | 35.7 | 9.2 | 3.2 | 1.6 |
| 1951 | 4.6 | 25.8 | 20.1 | 36.4 | 8.4 | 3.2 | 1.6 |
| 1952 | 4.6 | 26.2 | 19.8 | 37.0 | 7.6 | 3.2 | 1.6 |
| 1953 | 4.3 | 25.5 | 19.9 | 37.9 | 7.7 | 3.2 | 1.6 |
| 1954 | 4.1 | 24.7 | 19.8 | 38.8 | 7.8 | 3.3 | 1.6 |
| 1955 | 3.7 | 24.1 | 19.8 | 39.6 | 7.8 | 3.3 | 1.6 |
| 1956 | 3.4 | 23.4 | 19.9 | 40.4 | 7.9 | 3.4 | 1.6 |
| 1957 | 3.1 | 22.5 | 19.8 | 41.3 | 8.0 | 3.5 | 1.7 |
| 1958 | 3.0 | 22.3 | 20.6 | 40.2 | 8.8 | 3.4 | 1.6 |
| 1959 | 2.9 | 22.5 | 21.7 | 38.7 | 9.5 | 3.2 | 1.5 |
| 1960 | 2.7 | 21.7 | 22.2 | 38.0 | 10.6 | 3.3 | 1.5 |
| 1961 | 2.5 | 20.5 | 20.8 | 40.3 | 10.5 | 4.1 | 1.2 |
| 1962 | 2.3 | 18.9 | 19.4 | 43.0 | 10.6 | 4.8 | 1.0 |
| 1963 | 2.2 | 18.5 | 19.4 | 44.2 | 10.1 | 4.4 | 1.2 |
| 1964 | 2.1 | 18.2 | 19.4 | 45.2 | 9.7 | 4.0 | 1.4 |
| 1965 | 2.0 | 17.4 | 19.2 | 45.9 | 9.7 | 4.2 | 1.6 |
| 1966 | 1.6 | 16.7 | 19.1 | 47.4 | 10.3 | 3.5 | 1.5 |
| 1967 | 1.3 | 15.2 | 18.9 | 48.0 | 12.0 | 3.5 | 1.1 |
| 1968 | 1.4 | 13.5 | 18.6 | 50.1 | 11.7 | 3.3 | 1.3 |
| 1969 | 1.1 | 12.4 | 17.7 | 50.6 | 12.3 | 4.1 | 1.7 |
| 1970 | 1.1 | 11.7 | 17.2 | 50.3 | 13.2 | 4.4 | 2.1 |
| 1971 | 1.2 | 10.5 | 16.9 | 51.3 | 13.6 | 4.8 | 1.6 |
| 1972 | 1.1 | 9.5 | 16.0 | 52.5 | 14.2 | 4.8 | 1.8 |
| 1973 | 1.0 | 8.9 | 15.5 | 50.8 | 15.9 | 5.6 | 2.2 |
| 1974 | .8 | 8.3 | 14.9 | 50.8 | 16.1 | 6.3 | 2.8 |
| 1975 | .8 | 7.7 | 15.1 | 50.3 | 16.4 | 6.9 | 2.8 |
| 1976 | .9 | 7.3 | 14.9 | 50.4 | 16.8 | 7.1 | 2.7 |
| 1977 | .8 | 6.9 | 14.4 | 50.1 | 17.6 | 7.3 | 2.8 |
| 1978 | .8 | 6.0 | 13.2 | 50.4 | 18.5 | 7.7 | 3.4 |
| 1979 | .7 | 5.7 | 12.4 | 50.2 | 18.8 | 8.6 | 3.6 |
| 1980 | .6 | 5.2 | 11.9 | 50.0 | 19.7 | 8.9 | 3.6 |
| 1981 | .7 | 4.9 | 11.3 | 49.8 | 19.7 | 9.3 | 4.4 |
| 1982 | .6 | 4.4 | 10.4 | 48.7 | 20.6 | 10.4 | 4.9 |
| 1983 | .6 | 3.9 | 9.9 | 48.5 | 21.0 | 11.0 | 5.2 |
| 1984 | .6 | 3.7 | 9.7 | 47.3 | 22.0 | 11.7 | 5.1 |
| 1985 | .5 | 3.4 | 9.1 | 47.0 | 22.6 | 12.2 | 5.2 |
| 1986 | .4 | 3.3 | 8.9 | 46.8 | 22.7 | 12.3 | 5.5 |
| 1987 | .7 | 3.0 | 9.3 | 46.0 | 23.0 | 12.5 | 5.5 |
| 1988 | .7 | 2.8 | 9.0 | 45.6 | 22.8 | 13.2 | 5.9 |
| 1989 | .6 | 2.7 | 8.5 | 45.0 | 23.3 | 13.5 | 6.3 |
| 1990 | .6 | 2.7 | 8.4 | 44.4 | 23.4 | 14.1 | 6.3 |
| 1991[1] | .5 | 2.2 | 6.6 | 41.1 | 29.5 | 15.2 | 4.9 |
| 1992 | .5 | 2.1 | 6.2 | 39.8 | 30.4 | 15.7 | 5.2 |
| 1993[2] | .5 | 2.2 | 6.6 | 37.4 | 32.2 | 15.8 | 5.2 |
| 1994 | .5 | 2.2 | 6.6 | 36.5 | 32.4 | 16.2 | 5.6 |
| 1995 | .5 | 2.2 | 6.8 | 36.1 | 31.8 | 16.9 | 5.7 |
| 1996 | .4 | 2.1 | 6.5 | 36.7 | 31.2 | 17.4 | 5.7 |
| 1997 | .5 | 2.1 | 6.3 | 35.8 | 31.5 | 17.6 | 6.2 |
| 1998 | .5 | 2.0 | 6.6 | 35.3 | 31.7 | 17.8 | 6.0 |
| 1999 | .5 | 2.1 | 6.4 | 34.5 | 32.2 | 18.2 | 6.2 |

[1] March 1992 Current Population Survey used in measuring 1991 data revised questions on educational attainment. Data prior to 1991 are not strictly comparable.

[2] May not be strictly comparable before 1993 data due to comprehensive revisions in the CPS questionnaire.

NOTE: Rows may not sum to 100.0 due to rounding.

## Table 17. Percent distribution of all hours worked by men in the private business sector by years of completed schooling, 1948-99

| Year | Years of completed schooling | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0-4 | 5-8 | 9-11 | 12 | 13-15 | 16 | 17+ |
| 1948 | 8.3 | 35.6 | 20.5 | 23.1 | 6.5 | 3.6 | 2.4 |
| 1949 | 9.3 | 36.0 | 19.5 | 21.4 | 7.1 | 4.0 | 2.7 |
| 1950 | 9.1 | 35.9 | 19.5 | 21.5 | 7.2 | 4.1 | 2.7 |
| 1951 | 8.8 | 35.1 | 19.1 | 22.4 | 7.4 | 4.3 | 2.9 |
| 1952 | 8.5 | 34.4 | 18.8 | 23.3 | 7.6 | 4.4 | 3.0 |
| 1953 | 8.1 | 33.4 | 19.0 | 24.0 | 7.7 | 4.7 | 3.2 |
| 1954 | 7.6 | 32.4 | 19.1 | 24.7 | 7.7 | 4.9 | 3.4 |
| 1955 | 7.1 | 31.3 | 19.4 | 25.7 | 7.8 | 5.1 | 3.6 |
| 1956 | 6.7 | 30.3 | 19.6 | 26.5 | 7.9 | 5.3 | 3.7 |
| 1957 | 6.2 | 29.3 | 19.8 | 27.3 | 7.9 | 5.5 | 3.9 |
| 1958 | 5.9 | 28.9 | 20.2 | 26.8 | 8.6 | 5.5 | 4.0 |
| 1959 | 5.5 | 28.4 | 20.7 | 26.4 | 9.3 | 5.5 | 4.0 |
| 1960 | 5.2 | 27.8 | 21.1 | 26.1 | 10.1 | 5.6 | 4.1 |
| 1961 | 4.8 | 25.8 | 20.4 | 28.2 | 10.2 | 6.5 | 4.2 |
| 1962 | 4.5 | 23.8 | 19.6 | 30.2 | 10.2 | 7.3 | 4.3 |
| 1963 | 4.1 | 22.9 | 19.6 | 31.5 | 10.2 | 7.2 | 4.5 |
| 1964 | 3.7 | 22.0 | 19.6 | 32.8 | 10.2 | 7.0 | 4.7 |
| 1965 | 3.8 | 21.1 | 19.3 | 33.8 | 10.1 | 7.5 | 4.5 |
| 1966 | 3.4 | 20.4 | 19.5 | 34.4 | 10.2 | 7.8 | 4.4 |
| 1967 | 2.9 | 18.6 | 18.8 | 35.3 | 11.9 | 7.6 | 5.1 |
| 1968 | 2.7 | 17.9 | 18.7 | 35.8 | 12.2 | 7.7 | 5.0 |
| 1969 | 2.5 | 17.0 | 17.7 | 36.4 | 12.8 | 8.2 | 5.4 |
| 1970 | 2.4 | 15.7 | 16.9 | 37.2 | 13.5 | 8.6 | 5.7 |
| 1971 | 2.3 | 14.8 | 17.2 | 37.2 | 13.8 | 8.8 | 5.8 |
| 1972 | 2.3 | 12.9 | 16.3 | 38.8 | 14.6 | 9.1 | 6.0 |
| 1973 | 2.1 | 12.4 | 15.7 | 38.6 | 15.2 | 9.5 | 6.5 |
| 1974 | 1.7 | 10.7 | 14.9 | 38.7 | 16.0 | 10.9 | 7.2 |
| 1975 | 1.8 | 10.8 | 14.9 | 38.9 | 15.9 | 10.7 | 7.0 |
| 1976 | 1.7 | 10.1 | 15.0 | 38.5 | 16.4 | 10.9 | 7.3 |
| 1977 | 1.7 | 9.7 | 14.5 | 38.4 | 17.4 | 10.9 | 7.5 |
| 1978 | 1.5 | 8.9 | 13.6 | 39.0 | 18.1 | 11.1 | 7.8 |
| 1979 | 1.4 | 8.5 | 13.7 | 39.0 | 17.8 | 11.5 | 8.1 |
| 1980 | 1.4 | 7.8 | 13.1 | 39.5 | 17.8 | 12.1 | 8.3 |
| 1981 | 1.3 | 7.3 | 12.5 | 39.6 | 17.6 | 12.5 | 9.2 |
| 1982 | 1.3 | 6.5 | 11.7 | 38.6 | 18.0 | 13.8 | 10.2 |
| 1983 | 1.0 | 6.4 | 10.9 | 39.2 | 18.4 | 13.9 | 10.1 |
| 1984 | 1.1 | 6.2 | 11.0 | 39.2 | 18.7 | 14.1 | 9.8 |
| 1985 | 1.1 | 5.8 | 10.5 | 39.4 | 19.4 | 14.5 | 9.5 |
| 1986 | 1.0 | 5.6 | 10.7 | 39.0 | 39.0 | 14.5 | 9.9 |
| 1987 | 1.1 | 5.2 | 10.7 | 39.2 | 18.8 | 14.8 | 10.1 |
| 1988 | 1.2 | 5.1 | 10.2 | 38.8 | 19.5 | 14.7 | 10.6 |
| 1989 | 1.3 | 4.9 | 10.0 | 38.8 | 20.0 | 15.2 | 10.1 |
| 1990 | 1.2 | 4.5 | 9.7 | 39.2 | 20.2 | 15.1 | 10.0 |
| 1991[1] | 1.0 | 3.9 | 8.2 | 37.1 | 24.4 | 17.0 | 8.4 |
| 1992 | 1.0 | 3.7 | 7.8 | 36.2 | 25.0 | 17.2 | 9.1 |
| 1993[2] | 1.0 | 3.8 | 7.7 | 35.2 | 26.0 | 17.4 | 8.9 |
| 1994 | 1.0 | 3.7 | 7.6 | 34.7 | 26.1 | 18.0 | 8.9 |
| 1995 | 1.0 | 3.7 | 8.0 | 34.5 | 26.3 | 17.6 | 8.9 |
| 1996 | 1.0 | 3.7 | 8.1 | 34.3 | 26.0 | 18.0 | 8.8 |
| 1997 | 1.0 | 3.4 | 7.8 | 34.8 | 26.0 | 18.2 | 8.9 |
| 1989 | 0.8 | 3.3 | 7.8 | 34.5 | 25.9 | 19.0 | 8.7 |
| 1999 | 0.9 | 3.4 | 7.4 | 33.9 | 26.2 | 18.9 | 9.3 |

[1] March 1992 Current Population Survey used in measuring 1991 data contained revised questions on educational attainment. Data prior to 1991 are not strictly comparable.

[2] May not be strictly comparable before 1993 data due to comprehensive revisions in the CPS questionnaire.

NOTE: Rows may not sum to 100.0 due to rounding.

Table 18. **Employment Cost Index for wages and salaries, annual averages,[1] 1976-00**

| Year | Civilian workers | State and local government workers | Private industry workers | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | All private industry workers | White collar workers | Blue collar workers | Goods-producing workers | Service-producing workers | Manufacturing workers | Nonmanufacturing workers |
| 1976 | – | – | 47.9 | 46.8 | 49.5 | 49.0 | 47.1 | 48.3 | 47.7 |
| 1977 | – | – | 51.3 | 49.8 | 53.3 | 52.8 | 50.1 | 52.1 | 50.8 |
| 1978 | – | – | 55.2 | 53.5 | 57.5 | 57.0 | 53.9 | 56.2 | 54.7 |
| 1979 | – | – | 59.6 | 57.5 | 62.4 | 61.6 | 58.1 | 60.9 | 59.0 |
| 1980 | – | – | 65.1 | 62.7 | 68.4 | 67.5 | 63.4 | 66.8 | 64.2 |
| 1981 | – | – | 71.0 | 68.5 | 74.6 | 73.5 | 69.2 | 72.8 | 70.2 |
| 1982 | 75.1 | 71.0 | 76.0 | 73.6 | 79.4 | 78.6 | 74.2 | 77.7 | 75.2 |
| 1983 | 79.1 | 75.0 | 80.0 | 77.9 | 83.0 | 82.0 | 78.5 | 81.2 | 79.4 |
| 1984 | 82.8 | 79.3 | 83.5 | 81.7 | 86.0 | 85.2 | 82.5 | 84.7 | 83.1 |
| 1985 | 86.5 | 83.8 | 87.2 | 85.7 | 89.2 | 88.6 | 86.3 | 88.3 | 86.7 |
| 1986 | 89.9 | 88.3 | 90.2 | 89.2 | 91.7 | 91.5 | 89.4 | 91.3 | 89.7 |
| 1987 | 92.9 | 92.4 | 93.1 | 92.4 | 94.0 | 93.9 | 92.5 | 93.9 | 92.8 |
| 1988 | 96.6 | 96.7 | 96.5 | 96.1 | 97.1 | 97.2 | 96.1 | 97.1 | 96.3 |
| 1989 | 100.8 | 101.6 | 100.6 | 100.7 | 100.4 | 100.5 | 100.7 | 100.5 | 100.7 |
| 1990 | 105.3 | 107.2 | 104.8 | 105.3 | 104.1 | 104.6 | 105.0 | 104.9 | 104.8 |
| 1991 | 109.4 | 111.9 | 108.8 | 109.5 | 107.6 | 108.4 | 109.0 | 108.9 | 108.7 |
| 1992 | 112.6 | 115.1 | 111.9 | 112.7 | 110.7 | 111.8 | 112.0 | 112.6 | 111.6 |
| 1993 | 115.8 | 118.4 | 115.2 | 116.1 | 113.7 | 114.9 | 115.3 | 116.0 | 114.8 |
| 1994 | 119.2 | 121.8 | 118.5 | 119.7 | 116.9 | 118.4 | 118.6 | 119.5 | 118.1 |
| 1995 | 122.6 | 125.7 | 121.9 | 123.1 | 120.3 | 121.7 | 122.0 | 123.2 | 121.3 |
| 1996 | 126.6 | 129.2 | 126.0 | 127.4 | 123.9 | 125.5 | 126.2 | 127.0 | 125.4 |
| 1997 | 130.9 | 132.7 | 130.4 | 132.1 | 127.7 | 129.2 | 130.9 | 130.7 | 130.1 |
| 1998 | 135.9 | 136.7 | 135.7 | 137.9 | 131.8 | 133.7 | 136.5 | 135.3 | 135.5 |
| 1999 | 140.5 | 141.1 | 140.2 | 142.7 | 136.1 | 138.0 | 141.3 | 139.6 | 140.2 |
| 2000 | 146.1 | 146.1 | 146.0 | 148.8 | 141.1 | 143.4 | 147.1 | 144.9 | 146.0 |

Dash indicates data not available.

[1] The annual average is the average for four quarters of a year.

Table 19. **Employer compensation costs per employee hours worked, all private industry, 1986-00**

| Measure | Total compensation | Wages and salaries | Total benefits | Paid leave | Supplemental pay | Insurance | Retirement and savings | Legally required benefits | Other benefits |
|---|---|---|---|---|---|---|---|---|---|
| Cost per hour worked | | | | | | | | | |
| 1986 | $13.25 | $9.67 | $3.58 | $0.93 | $0.30 | $0.73 | $0.50 | $1.11 | $0.02 |
| 1987 | 13.42 | 9.83 | 3.60 | .93 | .32 | .72 | .48 | 1.13 | .02 |
| 1988 | 13.79 | 10.02 | 3.77 | .97 | .33 | .78 | .45 | 1.22 | .02 |
| 1989 | 14.28 | 10.38 | 3.90 | 1.00 | .34 | .85 | .42 | 1.27 | .02 |
| 1990 | 14.96 | 10.84 | 4.13 | 1.03 | .37 | .92 | .45 | 1.35 | ([1]) |
| 1991 | 15.40 | 11.14 | 4.27 | 1.05 | .36 | 1.01 | .44 | 1.40 | ([1]) |
| 1992 | 16.14 | 11.58 | 4.55 | 1.09 | .39 | 1.12 | .46 | 1.47 | .02 |
| 1993 | 16.70 | 11.90 | 4.80 | 1.11 | .42 | 1.19 | .48 | 1.55 | .04 |
| 1994 | 17.08 | 12.14 | 4.94 | 1.11 | .44 | 1.23 | .52 | 1.60 | .04 |
| 1995 | 17.10 | 12.25 | 4.85 | 1.09 | .47 | 1.15 | .52 | 1.59 | .03 |
| 1996 | 17.49 | 12.58 | 4.91 | 1.12 | .49 | 1.14 | .55 | 1.59 | .03 |
| 1997 | 17.97 | 13.04 | 4.94 | 1.14 | .51 | 1.09 | .55 | 1.62 | .03 |
| 1998 | 18.50 | 13.47 | 5.02 | 1.16 | .56 | 1.10 | .55 | 1.63 | .03 |
| 1999 | 19.00 | 13.87 | 5.13 | 1.20 | .55 | 1.13 | .57 | 1.65 | .03 |
| 2000 | 19.85 | 14.49 | 5.36 | 1.28 | .60 | 1.19 | .59 | 1.67 | .03 |
| Percent of total compensation | | | | | | | | | |
| 1986 | 100.0 | 73.0 | 27.0 | 7.0 | 2.3 | 5.5 | 3.8 | 8.4 | .1 |
| 1987 | 100.0 | 73.2 | 26.8 | 6.9 | 2.4 | 5.4 | 3.6 | 8.4 | .1 |
| 1988 | 100.0 | 72.7 | 27.3 | 7.0 | 2.4 | 5.6 | 3.3 | 8.8 | .2 |
| 1989 | 100.0 | 72.7 | 27.3 | 7.0 | 2.4 | 6.0 | 2.9 | 8.9 | .1 |
| 1990 | 100.0 | 72.4 | 27.6 | 6.9 | 2.5 | 6.1 | 3.0 | 9.0 | ([1]) |
| 1991 | 100.0 | 72.3 | 27.7 | 6.8 | 2.3 | 6.5 | 2.9 | 9.1 | ([1]) |
| 1992 | 100.0 | 71.8 | 28.2 | 6.8 | 2.4 | 6.9 | 2.9 | 9.1 | .1 |
| 1993 | 100.0 | 71.3 | 28.7 | 6.6 | 2.5 | 7.2 | 2.9 | 9.3 | .2 |
| 1994 | 100.0 | 71.1 | 28.9 | 6.5 | 2.6 | 7.2 | 3.0 | 9.4 | .2 |
| 1995 | 100.0 | 71.6 | 28.4 | 6.4 | 2.8 | 6.7 | 3.0 | 9.3 | .2 |
| 1996 | 100.0 | 71.9 | 28.1 | 6.4 | 2.8 | 6.5 | 3.1 | 9.1 | .2 |
| 1997 | 100.0 | 72.5 | 27.5 | 6.3 | 2.9 | 6.1 | 3.0 | 9.0 | .1 |
| 1998 | 100.0 | 72.8 | 27.1 | 6.3 | 3.0 | 5.9 | 3.0 | 8.8 | .2 |
| 1999 | 100.0 | 73.0 | 27.0 | 6.3 | 2.9 | 5.9 | 3.0 | 8.7 | .2 |
| 2000 | 100.0 | 73.0 | 27.0 | 6.4 | 3.0 | 6.0 | 3.0 | 8.4 | .2 |

[1] Cost per hour worked is $0.01 or less.

## Table 20. Mean hourly earnings[1] for selected occupations, all workers, all industries, selected areas,[2] April 2000

| Occupation[3] | New York-Northern New Jersey-Long Island, NY-NJ-CT-PA | Washington-Baltimore, DC-MD-VA-WV | Detroit-Ann Arbor-Flint, MI | San Francisco-Oakland-San Jose, CA | Los Angeles-Riverside-Orange County CA |
|---|---|---|---|---|---|
| **ALL** | $21.18 | $18.47 | $19.27 | $22.06 | $18.27 |
| All, excluding sales | 21.46 | 18.55 | 19.47 | 22.52 | 18.45 |
| **WHITE COLLAR** | 25.44 | 22.18 | 23.29 | 26.21 | 22.71 |
| White collar, excluding sales | 26.31 | 22.80 | 24.30 | 27.45 | 23.71 |
| Professional specialty and technical | 32.30 | 27.20 | 28.84 | 33.14 | 29.87 |
| Professional specialty | 34.11 | 28.65 | 31.40 | 34.82 | 31.80 |
| Engineers, architects, and surveyors | 31.03 | 30.66 | 31.96 | 37.61 | 34.64 |
| Aerospace engineers | – | – | – | – | 35.94 |
| Civil engineers | – | 29.93 | – | 35.13 | 28.93 |
| Electrical and electronic engineers | 34.74 | 33.88 | – | 38.94 | – |
| Industrial engineers | 27.23 | – | 28.77 | 31.02 | – |
| Mechanical engineers | 27.16 | – | 31.49 | – | 30.24 |
| Engineers, n.e.c. | 32.34 | 34.18 | 34.08 | 38.95 | 33.90 |
| Mathematical and computer scientists | 39.31 | 29.23 | 28.78 | 37.31 | 28.53 |
| Computer systems analysts and scientists | 37.09 | 29.58 | 27.69 | 37.16 | 28.42 |
| Operations and systems researchers and analysts | 60.34 | 23.71 | 30.54 | – | – |
| Natural scientists | 36.39 | 25.63 | 22.45 | 28.07 | 28.99 |
| Chemists, except biochemists | 37.07 | – | – | – | – |
| Medical scientists | 39.84 | – | – | – | – |
| Health related | 28.05 | 25.08 | 24.74 | 29.97 | 27.25 |
| Physicians | 31.44 | 36.47 | 32.64 | 36.68 | 51.68 |
| Registered nurses | 27.74 | 22.51 | 23.26 | 30.09 | 24.97 |
| Pharmacists | 27.31 | 32.93 | 32.21 | – | 34.47 |
| Dietitians | 18.34 | – | 17.08 | 22.51 | – |
| Respiratory therapists | 22.77 | 22.09 | – | – | – |
| Speech therapists | – | 29.02 | – | – | – |
| Therapists, n.e.c. | – | 18.93 | – | – | – |
| Teachers, college and university | 48.35 | 33.96 | 41.49 | 46.87 | 39.00 |
| Engineering teachers | – | – | 65.61 | – | – |
| Mathematical science teachers | – | 33.83 | – | – | – |
| Medical science teachers | 97.97 | – | – | – | – |
| Health specialities teachers | – | – | 36.85 | – | – |
| Business, commerce and marketing teachers | – | 31.26 | – | 43.65 | 50.66 |
| English teachers | – | – | – | – | 34.94 |
| Teachers, except college and university | 38.31 | 27.37 | 38.26 | 34.10 | 32.63 |
| Prekindergarten and kindergarten | 33.43 | 21.27 | 35.49 | 26.29 | 14.05 |
| Elementary school teachers | 41.53 | 29.24 | 40.12 | 37.53 | 35.90 |
| Secondary school teachers | 44.12 | 31.45 | 41.42 | 33.07 | 36.11 |
| Teachers, special education | 42.40 | 27.60 | 37.71 | 42.75 | – |
| Teachers, n.e.c. | 36.87 | 27.78 | 33.63 | 30.81 | 30.31 |
| Substitute teachers | 11.52 | – | – | – | 17.96 |
| Vocational and educational counselors | 26.63 | 23.69 | 24.87 | 22.16 | 27.31 |
| Librarians, archivists, and curators | 32.47 | 23.46 | 27.80 | 26.93 | – |
| Librarians | 30.80 | 23.35 | 27.80 | 26.93 | – |
| Social scientists and urban planners | 31.64 | 26.70 | – | 28.12 | 32.83 |
| Economists | 31.77 | – | – | 29.01 | – |
| Psychologists | 32.13 | 22.82 | – | 26.77 | 30.86 |
| Social, recreation, and religious workers | 22.41 | 17.03 | 24.30 | 22.74 | 20.45 |
| Social workers | 22.73 | 17.42 | 24.53 | 24.40 | 21.48 |
| Recreation workers | 16.53 | 16.05 | – | – | 14.03 |
| Lawyers and judges | 47.52 | 53.67 | 56.31 | 61.53 | 39.55 |
| Lawyers | 47.52 | 62.46 | 56.07 | 61.53 | 39.55 |
| Writers, authors, entertainers, athletes, and professionals, n.e.c. | 31.76 | 30.17 | 33.31 | 26.20 | 39.56 |
| Designers | 31.35 | 19.49 | – | – | 33.43 |
| Editors and reporters | 38.58 | 32.76 | – | – | 37.43 |
| Public relations specialists | 22.58 | – | – | – | – |
| Athletes | 16.67 | – | – | – | – |
| Professionals, n.e.c. | 30.82 | – | – | 21.96 | 23.80 |
| Technical | 24.33 | 21.01 | 20.08 | 25.40 | 21.61 |
| Clinical laboratory technologists and technicians | 19.60 | 16.75 | 19.69 | 24.57 | 21.98 |
| Health record technologists and technicians | – | 12.49 | 15.98 | – | – |
| Radiological technicians | 23.53 | 19.37 | 19.15 | 26.34 | 20.82 |
| Licensed practical nurses | 17.62 | 16.01 | 16.08 | 18.96 | 15.11 |
| Health technologists and technicians, n.e.c. | 16.61 | 16.43 | 13.22 | 18.89 | 16.72 |
| Electrical and electronic technicians | 20.12 | 18.89 | 22.75 | 23.60 | 22.11 |
| Mechanical engineering technicians | – | – | 23.99 | – | – |
| Engineering technicians, n.e.c. | 17.62 | – | 25.32 | 22.28 | 23.62 |
| Drafters | – | – | 23.33 | 27.54 | – |
| Airplane pilots and navigators | – | 93.39 | – | – | 80.85 |
| Broadcast equipment operators | – | 20.32 | – | – | – |
| Computer programmers | 28.50 | 19.95 | 32.18 | 30.05 | – |
| Legal assistants | – | – | – | 23.02 | – |
| Technical and related, n.e.c. | 22.52 | 17.68 | 19.91 | 24.54 | 25.53 |

See footnotes at end of table.

Table 20. **Mean hourly earnings[1] for selected occupations, all workers, all industries, selected areas,[2] April 2000**–Continued

| Occupation[3] | New York-Northern New Jersey-Long Island, NY-NJ-CT-PA | Washington-Baltimore, DC-MD-VA-WV | Detroit-Ann Arbor-Flint, MI | San Francisco-Oakland-San Jose, CA | Los Angeles-Riverside-Orange County CA |
|---|---|---|---|---|---|
| **WHITE COLLAR**–Continued | | | | | |
| Executive, administrative, and managerial | $34.67 | $29.16 | $31.88 | $36.55 | $31.52 |
| Executives, administrators, and managers | 39.93 | 32.35 | 35.13 | 43.67 | 35.81 |
| Administrators and officials, public administration | 37.51 | 25.63 | 33.38 | 33.12 | – |
| Financial managers | 43.11 | 48.11 | 33.67 | 38.93 | 37.15 |
| Personnel and labor relations managers | 37.05 | 30.19 | – | – | 36.74 |
| Managers, marketing, advertising and public relations | 47.29 | 43.78 | 42.96 | 45.45 | 36.09 |
| Administrators, education and related fields | 42.58 | 32.46 | 41.09 | 36.77 | 39.19 |
| Managers, medicine and health | 38.38 | 26.74 | 26.75 | 34.48 | 32.04 |
| Managers, food servicing and lodging establishments | – | – | – | – | 19.05 |
| Managers, service organizations, n.e.c. | 38.70 | 28.45 | – | 22.15 | 29.90 |
| Managers and administrators, n.e.c. | 38.26 | 33.36 | 38.08 | 49.70 | 37.83 |
| Management related | 26.57 | 22.97 | 27.21 | 26.92 | 24.05 |
| Accountants and auditors | 26.29 | 21.02 | 25.12 | 28.00 | 24.24 |
| Other financial officers | 27.67 | 29.50 | 30.45 | 31.39 | 21.35 |
| Management analysts | 32.23 | – | 27.74 | 29.58 | 28.14 |
| Personnel, training, and labor relations specialists | 25.90 | 20.49 | 24.69 | 25.63 | 22.44 |
| Purchasing agents and buyers, n.e.c. | 23.54 | 28.92 | 29.47 | 25.99 | 21.98 |
| Construction inspectors | 24.85 | – | – | – | – |
| Inspectors and compliance officers, except construction | 21.35 | – | – | 27.59 | 25.39 |
| Management related, n.e.c. | 27.70 | 24.52 | 27.66 | 24.65 | 23.51 |
| Sales | 16.06 | 17.39 | 16.25 | 15.24 | 15.73 |
| Supervisors, sales | 24.55 | 19.66 | 25.08 | 17.03 | 29.20 |
| Sales, other business services | 33.16 | 26.39 | 17.24 | – | 15.78 |
| Sales representatives, mining, manufacturing, and wholesale | 27.11 | – | 26.99 | – | 22.86 |
| Sales workers, motor vehicles and boats | – | – | – | – | 23.28 |
| Sales workers, apparel | 9.58 | 12.91 | – | 8.83 | 8.88 |
| Sales workers, furniture & home furnishings | – | – | 12.80 | 9.37 | 8.31 |
| Sales workers, radio, tv, hi-fi, & appliances | 17.70 | – | – | – | – |
| Sales workers, hardware and building supplies | – | 12.50 | – | – | – |
| Sales workers, other commodities | 9.28 | 9.37 | 11.00 | 13.65 | 13.50 |
| Cashiers | 9.26 | 11.08 | 8.36 | 10.68 | 10.76 |
| Sales support, n.e.c. | 14.70 | – | – | 14.56 | 11.15 |
| Administrative support, including clerical | 15.53 | 13.50 | 13.68 | 15.91 | 13.98 |
| Supervisors, general office | 21.29 | 18.92 | 19.07 | 22.90 | 19.67 |
| Supervisors, financial records processing | 20.96 | – | – | – | – |
| Supervisors, distribution, scheduling, and adjusting clerks | 19.48 | – | – | – | 22.82 |
| Computer operators | 15.52 | – | 17.67 | 21.39 | – |
| Secretaries | 17.22 | 15.25 | 15.54 | 18.97 | 16.74 |
| Stenographers | 18.96 | – | – | 21.52 | – |
| Typists | 14.00 | 14.13 | 11.79 | 14.92 | 14.01 |
| Interviewers | 12.85 | – | – | – | 10.86 |
| Hotel clerks | 11.44 | 8.24 | – | – | – |
| Transportation ticket and reservation agents | 16.32 | 15.15 | – | 14.65 | 13.87 |
| Receptionists | 12.64 | 9.91 | 10.43 | 11.76 | 11.04 |
| Information clerks, n.e.c. | – | 18.05 | 10.33 | 15.74 | 11.27 |
| Order clerks | 19.27 | 14.89 | 13.58 | 17.25 | 11.87 |
| Personnel clerks, except payroll and timekeeping | 14.30 | 14.24 | 16.15 | 18.89 | 14.41 |
| Library clerks | 12.46 | 9.66 | 9.79 | 15.83 | 12.87 |
| File clerks | 12.43 | – | – | 10.52 | – |
| Records clerks, n.e.c. | 14.42 | 13.19 | 11.80 | 12.67 | 13.72 |
| Bookkeepers, accounting and auditing clerks | 15.87 | 12.31 | 13.06 | 16.54 | 14.21 |
| Payroll and timekeeping clerks | 17.13 | – | – | – | 16.15 |
| Billing clerks | 12.92 | 12.90 | 11.67 | 15.74 | – |
| Duplicating machine operators | – | – | – | – | 12.83 |
| Telephone operators | 14.53 | 9.13 | 12.44 | – | 11.29 |
| Mail clerks, except postal service | 13.07 | 8.75 | – | – | 10.48 |
| Messengers | 9.36 | – | – | – | – |
| Dispatchers | 18.47 | 14.26 | – | 19.70 | 18.67 |
| Production coordinators | – | – | 21.27 | 17.23 | 16.61 |
| Traffic, shipping and receiving clerks | 12.88 | – | 12.71 | 16.11 | 10.15 |
| Stock and inventory clerks | 12.78 | 15.04 | 13.47 | 14.46 | 14.04 |
| Meter readers | – | – | – | – | 17.83 |
| Material recording, scheduling, and distribution clerks, n.e.c. | 13.69 | 10.06 | 14.73 | 15.04 | – |
| Insurance adjusters, examiners, and investigators | 18.93 | – | 13.37 | – | – |

See footnotes at end of table.

Table 20. **Mean hourly earnings[1] for selected occupations, all workers, all industries, selected areas,[2] April 2000–Continued**

| Occupation[3] | New York-Northern New Jersey-Long Island, NY-NJ-CT-PA | Washington-Baltimore, DC-MD-VA-WV | Detroit-Ann Arbor-Flint, MI | San Francisco-Oakland-San Jose, CA | Los Angeles-Riverside-Orange County CA |
|---|---|---|---|---|---|
| **WHITE COLLAR**–Continued | | | | | |
| Administrative support, including clerical–Continued | | | | | |
| Investigators and adjusters, except insurance | $16.60 | $13.52 | $12.36 | $18.49 | $16.67 |
| Eligibility clerks, social welfare | 15.71 | 14.26 | – | 19.25 | 13.85 |
| Bill and account collectors | – | – | 13.35 | – | 12.86 |
| General office clerks | 14.18 | 12.91 | 13.05 | 14.71 | 12.82 |
| Bank tellers | 10.79 | – | 10.52 | 10.04 | 8.99 |
| Data entry keyers | 12.11 | 9.71 | 9.43 | 10.83 | 13.15 |
| Teachers' aides | 14.73 | 10.94 | 11.09 | 11.73 | 12.45 |
| Administrative support, n.e.c. | 15.91 | 12.06 | 13.45 | 17.23 | 13.81 |
| **BLUE COLLAR** | 15.48 | 14.89 | 17.12 | 16.55 | 13.60 |
| Precision production, craft, and repair | 21.75 | 17.96 | 21.80 | 21.80 | 19.63 |
| Supervisors, mechanics and repairers | 25.26 | – | 23.88 | 26.43 | 26.55 |
| Automobile mechanics | 24.31 | 16.02 | 19.76 | 32.02 | 18.05 |
| Bus, truck, and stationary engine mechanics | – | – | – | 20.75 | – |
| Heavy equipment mechanics | – | – | 22.19 | – | – |
| Industrial machinery repairers | 18.60 | 16.30 | 21.08 | – | 20.06 |
| Machinery maintenance | – | – | – | – | 13.54 |
| Electronic repairers, communications and industrial equipment | – | – | – | 17.69 | 22.03 |
| Millwrights | – | – | 24.32 | – | – |
| Mechanics and repairers, n.e.c. | 20.74 | 19.01 | 21.07 | 21.70 | 17.06 |
| Supervisors, electricians and power transmission installers | 28.74 | – | – | – | – |
| Supervisors, construction trades, n.e.c. | – | – | 24.90 | – | – |
| Carpenters | 23.90 | 14.85 | – | – | 20.01 |
| Electricians | 23.12 | 21.14 | 25.25 | 30.18 | 24.78 |
| Electrician apprentices | – | 11.75 | – | – | – |
| Painters, construction and maintenance | 24.40 | – | 23.68 | – | 13.48 |
| Plumbers, pipefitters and steamfitters | – | – | 26.59 | – | – |
| Construction trades, n.e.c. | – | – | 17.04 | 22.16 | 19.44 |
| Drillers, oil well | – | – | – | – | 18.42 |
| Supervisors, production | 23.98 | 21.65 | 20.05 | 23.99 | 25.32 |
| Tool and die makers | – | – | 24.61 | – | 19.42 |
| Machinists | – | – | 21.67 | – | 18.34 |
| Precision grinders, filers, and tool sharpeners | – | – | 24.40 | – | – |
| Electrical and electronic equipment assemblers | 13.18 | 15.46 | – | 11.97 | 10.44 |
| Butchers and meat cutters | – | – | 14.31 | – | 10.06 |
| Inspectors, testers, and graders | – | – | 21.64 | 12.37 | 16.62 |
| Water and sewer treatment plant operators | – | – | – | – | 22.10 |
| Stationary engineers | 22.62 | 18.62 | – | 26.62 | – |
| Machine operators, assemblers, and inspectors | 11.26 | 14.10 | 15.97 | 13.02 | 10.45 |
| Punching and stamping press operators | 10.61 | – | 16.06 | – | – |
| Grinding, abrading, buffing, and polishing machine operators | 10.93 | – | 15.02 | – | – |
| Fabricating machine operators, n.e.c. | 11.74 | – | 21.74 | – | 11.80 |
| Molding and casting machine operators | – | – | 9.49 | – | 7.50 |
| Printing press operators | – | 17.77 | – | – | 14.09 |
| Textile sewing machine operators | 7.70 | – | 14.35 | – | 7.83 |
| Laundering and dry cleaning machine operators | 10.15 | 8.67 | 9.26 | – | – |
| Packaging and filling machine operators | 11.22 | – | – | – | – |
| Mixing and blending machine operators | 13.88 | – | – | – | 9.96 |
| Photographic process machine operators | 11.98 | – | – | – | 10.59 |
| Miscellaneous machine operators, n.e.c. | 12.67 | 11.16 | 13.45 | 12.92 | 11.61 |
| Welders and cutters | – | – | 18.66 | – | 16.30 |
| Assemblers | 8.80 | 17.67 | 17.35 | 12.31 | 10.06 |
| Production inspectors, checkers and examiners | 10.62 | – | 15.80 | – | 10.80 |
| Transportation and material moving | 16.21 | 14.52 | 15.87 | 16.44 | 13.24 |
| Truck drivers | 15.83 | 14.04 | 14.22 | 17.04 | 12.66 |
| Driver-sales workers | – | 9.79 | – | – | – |
| Bus drivers | 15.41 | 13.72 | 14.12 | – | 10.88 |
| Taxicab drivers and chauffeurs | 12.79 | – | – | – | – |
| Motor transportation, n.e.c. | 15.80 | – | – | – | – |
| Crane and tower operators | – | – | 20.04 | – | – |
| Industrial truck and tractor equipment operators | 15.63 | 16.39 | 15.86 | 17.38 | 12.76 |
| Miscellaneous material moving equipment operators, n.e.c. | – | – | – | 20.20 | – |
| Handlers, equipment cleaners, helpers, and laborers | 12.84 | 11.64 | 10.99 | 11.92 | 10.05 |
| Groundskeepers and gardeners, except farm | 12.51 | 10.19 | 13.99 | 16.17 | 11.21 |

See footnotes at end of table.

Table 20. **Mean hourly earnings[1] for selected occupations, all workers, all industries, selected areas,[2] April 2000–Continued**

| Occupation[3] | New York-Northern New Jersey-Long Island, NY-NJ-CT-PA | Washington-Baltimore, DC-MD-VA-WV | Detroit-Ann Arbor-Flint, MI | San Francisco-Oakland-San Jose, CA | Los Angeles-Riverside-Orange County CA |
|---|---|---|---|---|---|
| **BLUE COLLAR**–Continued | | | | | |
| Handlers, equipment cleaners, helpers, and laborers–Continued | | | | | |
| Supervisors, handlers, equipment cleaners, and laborers, n.e.c. | $18.86 | – | – | – | – |
| Helpers, mechanics and repairers | – | – | – | – | $10.31 |
| Helpers, construction trades | 15.45 | – | – | – | – |
| Construction laborers | – | – | – | – | 9.69 |
| Production helpers | 9.62 | – | – | – | 8.74 |
| Stock handlers and baggers | 12.05 | $10.22 | $9.68 | $10.46 | 10.68 |
| Machine feeders and offbearers | – | – | – | – | 10.12 |
| Freight, stock, and material handlers, n.e.c. | 12.24 | 13.29 | 11.06 | 15.89 | 9.66 |
| Garage and service station related | – | – | – | 9.33 | – |
| Vehicle washers and equipment cleaners | – | 10.63 | – | – | 7.30 |
| Hand packers and packagers | 11.03 | 11.52 | 10.53 | 8.31 | 8.87 |
| Laborers, except construction, n.e.c. | 11.64 | 10.13 | 13.17 | 14.89 | 10.67 |
| **SERVICE** | 14.02 | 10.85 | 10.91 | 13.61 | 11.59 |
| Protective service | 20.97 | 17.22 | 14.93 | 18.92 | 16.80 |
| Supervisors, police and detectives | 33.52 | – | – | – | – |
| Firefighting | – | 18.11 | 16.49 | 22.55 | – |
| Police and detectives, public service | 25.38 | 20.29 | 20.12 | 29.44 | 27.01 |
| Sheriffs, bailiffs, and other law enforcement officers | 21.72 | 17.58 | – | 24.25 | 22.91 |
| Correctional institution officers | 21.90 | 16.48 | 17.17 | – | – |
| Crossing guards | – | – | 7.49 | – | – |
| Guards and police, except public service | 11.66 | 9.23 | 8.78 | 10.18 | 8.07 |
| Protective service, n.e.c. | 15.09 | 17.85 | – | – | – |
| Food service | 8.94 | 7.68 | 7.86 | 9.48 | 8.05 |
| Waiters, waitresses, and bartenders | 6.59 | 4.69 | 5.55 | 8.87 | 6.29 |
| Bartenders | 9.33 | – | – | – | 8.00 |
| Waiters and waitresses | 6.36 | 4.00 | 4.14 | 8.63 | 5.92 |
| Waiters'/waitresses' assistants | 5.54 | 6.87 | – | 9.27 | 6.27 |
| Other food service | 9.77 | 9.55 | 8.51 | 9.71 | 8.74 |
| Supervisors, food preparation and service | 15.36 | 15.15 | – | – | 16.05 |
| Cooks | 12.12 | 9.54 | 10.01 | 15.47 | 9.50 |
| Food counter, fountain, and related | 9.62 | 7.64 | 6.27 | – | 6.83 |
| Kitchen workers, food preparation | 11.25 | 8.49 | 8.17 | 9.30 | 8.28 |
| Food preparation, n.e.c. | 7.86 | 8.03 | 7.40 | 8.04 | 7.30 |
| Health service | 10.33 | 9.67 | 10.02 | 12.49 | 9.63 |
| Health aides, except nursing | 12.05 | 10.37 | 11.21 | 15.26 | 12.58 |
| Nursing aides, orderlies and attendants | 10.05 | 9.44 | 9.73 | 11.56 | 8.88 |
| Cleaning and building service | 12.64 | 9.28 | 11.91 | 11.81 | 8.52 |
| Supervisors, cleaning and building service workers | 19.64 | 13.85 | 13.91 | – | 12.79 |
| Maids and housemen | 13.36 | 8.71 | 7.99 | 10.23 | 7.76 |
| Janitors and cleaners | 12.03 | 9.01 | 12.18 | 12.08 | 8.21 |
| Personal service | 13.90 | 10.59 | 8.95 | 14.91 | 10.64 |
| Attendants, amusement and recreation facilities | 10.33 | 6.73 | – | 9.26 | 7.44 |
| Public transportation attendants | 28.18 | 22.79 | – | – | 25.98 |
| Baggage porters and bellhops | – | – | – | 7.45 | – |
| Early childhood teachers' assistants | 11.48 | 12.91 | 6.64 | – | 9.92 |
| Child care workers, n.e.c. | 9.68 | 8.80 | 10.27 | 14.42 | 10.29 |
| Service, n.e.c. | 10.82 | 9.41 | 8.37 | 12.17 | 8.26 |

n.e.c. = not elsewhere classified.

[1] Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, deferred income payments, and deadhead pay. Excluded are shift differentials, premium pay for overtime, vacations and holidays, nonproduction bonuses, uniform and tool allowances, room and board, third party payments, on-call pay, and tips. The mean is computed by totaling the pay of all workers weighted by hours and dividing by the number of workers.

[2] The average payroll month for the selected areas was April 2000.

[3] A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into 1 of 9 major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups may include data for categories not shown separately.

Table 21. **Mean hourly earnings[1] by occupational group and level,[2] all workers, selected areas,[3] April 2000**

| Occupational group[4] and level | New York-Northern New Jersey-Long Island, NY-NJ-CT-PA | Washington-Baltimore, DC-MD-VA-WV | Detroit-Ann Arbor-Flint, MI | San Francisco-Oakland-San Jose, CA | Los Angeles-Riverside-Orange County CA |
|---|---|---|---|---|---|
| Computer systems analysts and scientists | $37.09 | $29.58 | $27.69 | $37.16 | $28.42 |
| Level 7 | – | 24.92 | – | 27.82 | – |
| Level 8 | – | – | – | 30.71 | – |
| Level 9 | 30.77 | 27.72 | 26.48 | 35.13 | 25.39 |
| Level 10 | 30.88 | 27.33 | – | 34.04 | – |
| Level 11 | 34.51 | 33.34 | 28.82 | 39.48 | 33.47 |
| Level 12 | 41.33 | 40.17 | – | 43.09 | – |
| Level 13 | 45.86 | – | – | 46.27 | – |
| Level 14 | 57.53 | – | – | – | – |
| Registered nurses | 27.74 | 22.51 | 23.26 | 30.09 | 24.97 |
| Level 7 | 28.24 | 20.49 | 23.05 | 29.96 | – |
| Level 8 | 27.31 | 22.27 | 22.59 | 28.06 | 23.24 |
| Level 9 | 26.33 | 22.80 | 22.79 | 30.09 | 25.37 |
| Level 10 | 34.49 | – | – | 34.66 | – |
| Level 11 | 30.23 | 29.44 | 29.03 | – | – |
| Accountants and auditors | 26.29 | 21.02 | 25.12 | 28.00 | 24.24 |
| Level 5 | 18.19 | 13.64 | – | – | – |
| Level 7 | 20.81 | 21.16 | – | – | 19.17 |
| Level 8 | 24.78 | 20.21 | 23.08 | 18.31 | – |
| Level 9 | 26.60 | 25.63 | 28.61 | 29.26 | 26.82 |
| Level 10 | 29.96 | – | – | – | – |
| Level 11 | 31.71 | – | – | – | – |
| Cashiers | 9.26 | 11.08 | 8.36 | 10.68 | 10.76 |
| Level 1 | – | – | 7.47 | – | – |
| Level 2 | – | 7.05 | 8.91 | – | – |
| Level 3 | 10.33 | 9.81 | 9.43 | 10.98 | 10.41 |
| Level 4 | 10.67 | – | – | – | 11.41 |
| Secretaries | 17.22 | 15.25 | 15.54 | 18.97 | 16.74 |
| Level 2 | – | 13.92 | – | – | – |
| Level 3 | 13.95 | 12.79 | 12.46 | – | 12.74 |
| Level 4 | 15.54 | 13.96 | 15.01 | 17.05 | 13.98 |
| Level 5 | 17.53 | 14.45 | 16.47 | 19.16 | 16.66 |
| Level 6 | 19.03 | 17.82 | – | 21.12 | 16.47 |
| Level 7 | 20.50 | 17.62 | 19.91 | 20.99 | 19.49 |
| Truck drivers | 15.83 | 14.04 | 14.22 | 17.04 | 12.66 |
| Level 2 | – | – | – | 17.45 | – |
| Level 3 | 16.15 | 8.99 | – | – | 8.53 |
| Level 4 | 14.98 | 15.45 | – | 18.57 | 16.22 |
| Level 5 | – | 15.20 | – | – | – |
| Guards and police, except public service | 11.66 | 9.23 | 8.78 | 10.18 | 8.07 |
| Level 3 | 9.44 | 8.10 | – | – | – |
| Level 4 | 13.70 | – | – | – | – |
| Janitors and cleaners | 12.03 | 9.01 | 12.18 | 12.08 | 8.21 |
| Level 1 | 11.08 | 7.82 | 10.45 | 8.81 | 7.62 |
| Level 2 | 9.82 | 8.77 | 13.24 | 10.47 | 9.09 |
| Level 3 | 14.15 | 11.80 | 14.45 | 15.93 | 11.53 |
| Level 4 | 13.57 | – | 13.83 | 11.29 | – |

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[1] Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, deferred income payments, and deadhead pay. Excluded are shift differentials, premium pay for overtime, vacations and holidays, nonproduction bonuses, uniform and tool allowances, room and board, third party payments, on-call pay, and tips. The mean is computed by totaling the pay of all workers weighted by hours and dividing by the number of workers.

[2] Each occupation for which wage data are collected in an establishment is evaluated based on 10 factors, including knowledge, complexity, work environment, and others. Points are assigned based on the occupation's ranking within each factor. The points are summed to determine the overall level of the occupation.

[3] The average payroll month for the selected areas was April 2000.

[4] A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into 1 of 9 major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups may include data for categories not shown separately.

Table 22. **Hourly wage percentiles for establishment jobs,[1] all workers:[2] selected occupations, all industries, selected areas, April 2000**

| Occupation[3] | New York-Northern New Jersey-Long Island, NY-NJ-CT-PA | | | | | Washington-Baltimore, DC-MD-VA-WV | | | | | Detroit-Ann Arbor-Flint, MI | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 25 | Median 50 | 75 | 90 | 10 | 25 | Median 50 | 75 | 90 | 10 | 25 | Median 50 |
| Computer systems analysts and scientists | $25.25 | $29.64 | $35.18 | $43.51 | $52.94 | $18.99 | $22.74 | $28.80 | $34.88 | $40.90 | $21.02 | $25.97 | $27.15 |
| Registered nurses | 21.50 | 23.40 | 26.59 | 32.38 | 35.17 | 18.00 | 20.28 | 22.08 | 23.77 | 26.57 | 19.74 | 21.52 | 22.58 |
| Accountants and auditors | 19.81 | 20.60 | 24.72 | 31.25 | 36.05 | 13.44 | 16.35 | 19.82 | 23.35 | 28.30 | 20.20 | 21.74 | 24.27 |
| Cashiers | 6.48 | 7.25 | 7.53 | 9.79 | 15.84 | 5.89 | 7.50 | 10.72 | 15.74 | 15.89 | 6.68 | 7.00 | 8.00 |
| Secretaries | 12.84 | 14.16 | 17.00 | 19.84 | 22.30 | 11.29 | 12.78 | 14.17 | 17.44 | 20.07 | 10.87 | 12.31 | 14.27 |
| Truck drivers | 9.52 | 14.29 | 16.11 | 17.18 | 21.42 | 10.06 | 12.87 | 14.34 | 16.09 | 17.99 | 8.17 | 12.69 | 14.23 |
| Guards and police, except public service | 6.25 | 9.02 | 10.07 | 15.02 | 16.42 | 7.75 | 7.75 | 8.42 | 11.45 | 12.00 | 7.00 | 7.00 | 8.61 |
| Janitors and cleaners | 7.26 | 7.75 | 11.81 | 15.92 | 17.44 | 5.85 | 6.67 | 8.42 | 10.64 | 13.75 | 7.62 | 8.57 | 11.23 |

See footnotes at end of table.

Table 22. **Hourly wage percentiles for establishment jobs,[1] all workers:[2] selected occupations, all industries, selected areas, April 2000 — Continued**

| Occupation[3] | Detroit-Ann Arbor-Flint, MI | | San Francisco-Oakland-San Jose, CA | | | | | Los Angeles-Riverside-Orange County CA | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 75 | 90 | 10 | 25 | Median 50 | 75 | 90 | 10 | 25 | Median 50 | 75 | 90 |
| Computer systems analysts and scientists | $31.00 | $33.57 | $26.05 | $29.08 | $36.79 | $43.44 | $48.05 | $22.64 | $24.17 | $26.66 | $32.38 | $36.82 |
| Registered nurses | 23.94 | 29.47 | 23.08 | 28.62 | 30.87 | 32.91 | 36.39 | 20.15 | 22.40 | 24.64 | 27.48 | 28.67 |
| Accountants and auditors | 25.09 | 38.27 | 17.58 | 26.41 | 29.57 | 31.76 | 34.42 | 17.68 | 19.01 | 24.04 | 28.72 | 32.21 |
| Cashiers | 8.63 | 12.23 | 7.20 | 8.00 | 9.50 | 11.83 | 16.88 | 6.70 | 7.11 | 11.09 | 12.60 | 16.70 |
| Secretaries | 17.36 | 22.12 | 13.94 | 15.77 | 18.43 | 21.68 | 24.35 | 12.00 | 14.19 | 16.43 | 19.17 | 21.25 |
| Truck drivers | 16.30 | 21.48 | 9.89 | 15.41 | 18.71 | 20.49 | 22.05 | 7.17 | 7.89 | 11.24 | 17.02 | 19.03 |
| Guards and police, except public service | 8.75 | 11.58 | 8.50 | 8.50 | 8.50 | 10.55 | 15.14 | 6.12 | 7.35 | 7.75 | 8.11 | 9.84 |
| Janitors and cleaners | 14.91 | 21.26 | 7.64 | 8.08 | 11.88 | 14.75 | 18.03 | 6.00 | 6.25 | 6.42 | 9.93 | 13.74 |

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[1] Percentiles are calculated from average hourly wages for sampled establishment jobs within each occupation. The percentiles describe the distribution of an occupation's employment by the average wage rates for its jobs.For example, at the 10th percentile hourly wage for an occupation, one-tenth of the occupation's employment are found in sampled establishment jobs whose average wages are the same or less, and nine-tenths are in jobs averaging the same or more. The calculations of the 25th, 50th, 75th, and 90th percentiles follow the same logic. Hourly wages are the straight-time wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips.

[2] All workers include full-time and part-time workers.

[3] A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into 1 of 9 major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups may include data for categories not shown separately.

Table 23. **Average hourly earnings of production workers on private nonfarm payrolls by major industry division, annual averages, 1947-2000**

(In current dollars)

| Year | Total private | Mining | Construction | Manufacturing | Transportation and public utilities | Wholesale trade | Retail trade | Finance, insurance and real estate | Services |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | $1.13 | $1.46 | $1.54 | $1.21 | – | $1.21 | $0.83 | $1.14 | – |
| 1948 | 1.22 | 1.66 | 1.71 | 1.32 | – | 1.30 | .90 | 1.20 | – |
| 1949 | 1.27 | 1.71 | 1.79 | 1.37 | – | 1.35 | .95 | 1.26 | – |
| 1950 | 1.33 | 1.77 | 1.86 | 1.43 | – | 1.35 | .98 | 1.26 | – |
| 1951 | 1.45 | 1.93 | 2.02 | 1.56 | – | 1.52 | 1.06 | 1.45 | – |
| 1952 | 1.52 | 2.01 | 2.13 | 1.64 | – | 1.61 | 1.09 | 1.51 | – |
| 1953 | 1.61 | 2.14 | 2.28 | 1.74 | – | 1.69 | 1.16 | 1.58 | – |
| 1954 | 1.65 | 2.14 | 2.38 | 1.78 | – | 1.76 | 1.20 | 1.65 | – |
| 1955 | 1.71 | 2.20 | 2.45 | 1.85 | – | 1.83 | 1.25 | 1.70 | – |
| 1956 | 1.80 | 2.33 | 2.57 | 1.95 | – | 1.93 | 1.30 | 1.78 | – |
| 1957 | 1.89 | 2.45 | 2.71 | 2.04 | – | 2.02 | 1.37 | 1.84 | – |
| 1958 | 1.95 | 2.47 | 2.82 | 2.10 | – | 2.09 | 1.42 | 1.89 | – |
| 1959 | 2.02 | 2.56 | 2.93 | 2.19 | – | 2.18 | 1.47 | 1.95 | – |
| 1960 | 2.09 | 2.60 | 3.07 | 2.26 | – | 2.24 | 1.52 | 2.02 | – |
| 1961 | 2.14 | 2.64 | 3.20 | 2.32 | – | 2.31 | 1.56 | 2.09 | – |
| 1962 | 2.22 | 2.70 | 3.31 | 2.39 | – | 2.37 | 1.63 | 2.17 | – |
| 1963 | 2.28 | 2.75 | 3.41 | 2.45 | – | 2.45 | 1.68 | 2.25 | – |
| 1964 | 2.36 | 2.81 | 3.55 | 2.53 | $2.89 | 2.52 | 1.75 | 2.30 | $1.94 |
| 1965 | 2.46 | 2.92 | 3.70 | 2.61 | 3.03 | 2.60 | 1.82 | 2.39 | 2.05 |
| 1966 | 2.56 | 3.05 | 3.89 | 2.71 | 3.11 | 2.73 | 1.91 | 2.47 | 2.17 |
| 1967 | 2.68 | 3.19 | 4.11 | 2.82 | 3.23 | 2.87 | 2.01 | 2.58 | 2.29 |
| 1968 | 2.85 | 3.35 | 4.41 | 3.01 | 3.42 | 3.04 | 2.16 | 2.75 | 2.42 |
| 1969 | 3.04 | 3.60 | 4.79 | 3.19 | 3.63 | 3.23 | 2.30 | 2.93 | 2.61 |
| 1970 | 3.23 | 3.85 | 5.24 | 3.35 | 3.85 | 3.43 | 2.44 | 3.07 | 2.81 |
| 1971 | 3.45 | 4.06 | 5.69 | 3.57 | 4.21 | 3.64 | 2.60 | 3.22 | 3.04 |
| 1972 | 3.70 | 4.44 | 6.06 | 3.82 | 4.65 | 3.85 | 2.75 | 3.36 | 3.27 |
| 1973 | 3.94 | 4.75 | 6.41 | 4.09 | 5.02 | 4.07 | 2.91 | 3.53 | 3.47 |
| 1974 | 4.24 | 5.23 | 6.81 | 4.42 | 5.41 | 4.38 | 3.14 | 3.77 | 3.75 |
| 1975 | 4.53 | 5.95 | 7.31 | 4.83 | 5.88 | 4.72 | 3.36 | 4.06 | 4.02 |
| 1976 | 4.86 | 6.46 | 7.71 | 5.22 | 6.45 | 5.02 | 3.57 | 4.27 | 4.31 |
| 1977 | 5.25 | 6.94 | 8.10 | 5.68 | 6.99 | 5.39 | 3.85 | 4.54 | 4.65 |
| 1978 | 5.69 | 7.67 | 8.66 | 6.17 | 7.57 | 5.88 | 4.20 | 4.89 | 4.99 |
| 1979 | 6.16 | 8.49 | 9.27 | 6.70 | 8.16 | 6.39 | 4.53 | 5.27 | 5.36 |
| 1980 | 6.66 | 9.17 | 9.94 | 7.27 | 8.87 | 6.95 | 4.88 | 5.79 | 5.85 |
| 1981 | 7.25 | 10.04 | 10.82 | 7.99 | 9.70 | 7.55 | 5.25 | 6.31 | 6.41 |
| 1982 | 7.68 | 10.77 | 11.63 | 8.49 | 10.32 | 8.08 | 5.48 | 6.78 | 6.92 |
| 1983 | 8.02 | 11.28 | 11.94 | 8.83 | 10.79 | 8.54 | 5.74 | 7.29 | 7.31 |
| 1984 | 8.32 | 11.63 | 12.13 | 9.19 | 11.12 | 8.88 | 5.85 | 7.63 | 7.59 |
| 1985 | 8.57 | 11.98 | 12.32 | 9.54 | 11.40 | 9.15 | 5.94 | 7.94 | 7.90 |
| 1986 | 8.76 | 12.46 | 12.48 | 9.73 | 11.70 | 9.34 | 6.03 | 8.36 | 8.18 |
| 1987 | 8.98 | 12.54 | 12.71 | 9.91 | 12.03 | 9.59 | 6.12 | 8.73 | 8.49 |
| 1988 | 9.28 | 12.80 | 13.08 | 10.19 | 12.24 | 9.98 | 6.31 | 9.06 | 8.88 |
| 1989 | 9.66 | 13.26 | 13.54 | 10.48 | 12.57 | 10.39 | 6.53 | 9.53 | 9.38 |
| 1990 | 10.01 | 13.68 | 13.77 | 10.83 | 12.92 | 10.79 | 6.75 | 9.97 | 9.83 |
| 1991 | 10.32 | 14.19 | 14.00 | 11.18 | 13.20 | 11.15 | 6.94 | 10.39 | 10.23 |
| 1992 | 10.57 | 14.54 | 14.15 | 11.46 | 13.43 | 11.39 | 7.12 | 10.82 | 10.54 |
| 1993 | 10.83 | 14.60 | 14.38 | 11.74 | 13.55 | 11.74 | 7.29 | 11.35 | 10.78 |
| 1994 | 11.12 | 14.88 | 14.73 | 12.07 | 13.78 | 12.06 | 7.49 | 11.83 | 11.04 |
| 1995 | 11.43 | 15.30 | 15.09 | 12.37 | 14.13 | 12.43 | 7.69 | 12.32 | 11.39 |
| 1996 | 11.82 | 15.62 | 15.47 | 12.77 | 14.45 | 12.87 | 7.99 | 12.80 | 11.79 |
| 1997 | 12.28 | 16.15 | 16.04 | 13.17 | 14.92 | 13.45 | 8.33 | 13.34 | 12.28 |
| 1998 | 12.78 | 16.91 | 16.61 | 13.49 | 15.31 | 14.07 | 8.74 | 14.07 | 12.84 |
| 1999 | 13.24 | 17.05 | 17.19 | 13.90 | 15.69 | 14.59 | 9.09 | 14.62 | 13.37 |
| 2000 | 13.75 | 17.24 | 17.88 | 14.38 | 16.22 | 15.20 | 9.46 | 15.07 | 13.91 |

Dash indicates data not available.

NOTE: Current estimates are projected from March 2000 benchmark levels.

## Table 24. **Productivity and related data, business and nonfarm business sectors, 1947-2000**

(Index, 1992=100)

| Year | Output per hour of all persons | | Output[1] | | Hours of all persons[2] | | Compensation per hour[3] | | Real compensation per hour[4] | | Unit labor cost | | Implicit price deflator [5] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector |
| 1947 | 31.8 | 36.7 | 20.7 | 20.3 | 65.0 | 55.3 | 6.8 | 7.3 | 39.6 | 42.5 | 21.4 | 19.9 | 20.5 | 19.2 |
| 1948 | 33.3 | 37.7 | 21.8 | 21.2 | 65.5 | 56.2 | 7.4 | 7.9 | 39.8 | 42.7 | 22.2 | 21.0 | 21.7 | 20.5 |
| 1949 | 34.0 | 39.0 | 21.6 | 21.0 | 63.3 | 53.9 | 7.5 | 8.2 | 40.9 | 44.6 | 22.0 | 21.0 | 21.5 | 20.7 |
| 1950 | 36.9 | 41.7 | 23.7 | 23.1 | 64.1 | 55.6 | 8.0 | 8.7 | 43.3 | 46.7 | 21.8 | 20.8 | 21.8 | 20.9 |
| 1951 | 38.0 | 42.7 | 25.2 | 24.9 | 66.1 | 58.2 | 8.8 | 9.4 | 44.0 | 47.1 | 23.2 | 22.1 | 23.5 | 22.3 |
| 1952 | 39.2 | 43.6 | 26.0 | 25.6 | 66.2 | 58.8 | 9.4 | 10.0 | 45.9 | 48.8 | 23.9 | 22.8 | 23.7 | 22.7 |
| 1953 | 40.7 | 44.6 | 27.2 | 26.9 | 67.0 | 60.2 | 10.0 | 10.5 | 48.5 | 51.2 | 24.5 | 23.6 | 23.9 | 23.2 |
| 1954 | 41.6 | 45.5 | 26.9 | 26.4 | 64.6 | 58.1 | 10.3 | 10.9 | 49.8 | 52.5 | 24.8 | 23.9 | 24.1 | 23.4 |
| 1955 | 43.3 | 47.4 | 29.0 | 28.6 | 67.0 | 60.4 | 10.6 | 11.3 | 51.3 | 54.7 | 24.4 | 23.8 | 24.4 | 23.8 |
| 1956 | 43.4 | 47.0 | 29.5 | 29.1 | 68.0 | 61.9 | 11.3 | 12.0 | 53.9 | 57.1 | 26.0 | 25.5 | 25.2 | 24.7 |
| 1957 | 44.7 | 48.2 | 30.0 | 29.7 | 67.0 | 61.6 | 12.0 | 12.7 | 55.6 | 58.5 | 26.9 | 26.3 | 26.0 | 25.4 |
| 1958 | 46.0 | 49.3 | 29.4 | 29.1 | 63.9 | 58.9 | 12.6 | 13.2 | 56.5 | 59.2 | 27.3 | 26.7 | 26.5 | 25.9 |
| 1959 | 47.9 | 51.3 | 31.9 | 31.6 | 66.6 | 61.6 | 13.1 | 13.7 | 58.4 | 61.1 | 27.4 | 26.7 | 26.7 | 26.2 |
| 1960 | 48.8 | 51.9 | 32.5 | 32.1 | 66.6 | 61.9 | 13.7 | 14.3 | 59.9 | 62.8 | 28.0 | 27.5 | 27.0 | 26.5 |
| 1961 | 50.6 | 53.7 | 33.1 | 32.8 | 65.5 | 61.1 | 14.2 | 14.8 | 61.8 | 64.4 | 28.1 | 27.6 | 27.2 | 26.7 |
| 1962 | 52.9 | 56.1 | 35.2 | 35.0 | 66.6 | 62.4 | 14.9 | 15.4 | 63.9 | 66.3 | 28.1 | 27.5 | 27.4 | 26.9 |
| 1963 | 55.0 | 58.1 | 36.8 | 36.6 | 67.0 | 63.1 | 15.4 | 16.0 | 65.4 | 67.7 | 28.0 | 27.5 | 27.6 | 27.1 |
| 1964 | 57.5 | 60.6 | 39.2 | 39.1 | 68.1 | 64.6 | 16.2 | 16.7 | 67.9 | 69.9 | 28.2 | 27.6 | 27.9 | 27.5 |
| 1965 | 59.6 | 62.4 | 41.9 | 41.9 | 70.4 | 67.1 | 16.8 | 17.2 | 69.3 | 71.1 | 28.2 | 27.6 | 28.4 | 27.8 |
| 1966 | 62.0 | 64.6 | 44.8 | 44.9 | 72.3 | 69.5 | 17.9 | 18.2 | 71.9 | 73.1 | 28.9 | 28.2 | 29.1 | 28.5 |
| 1967 | 63.4 | 65.8 | 45.6 | 45.7 | 72.0 | 69.4 | 19.0 | 19.3 | 73.7 | 75.1 | 29.9 | 29.4 | 29.9 | 29.4 |
| 1968 | 65.4 | 67.8 | 47.9 | 48.1 | 73.4 | 70.9 | 20.4 | 20.7 | 76.2 | 77.4 | 31.3 | 30.6 | 31.0 | 30.5 |
| 1969 | 65.7 | 67.9 | 49.4 | 49.5 | 75.2 | 73.0 | 21.9 | 22.2 | 77.4 | 78.4 | 33.3 | 32.6 | 32.4 | 31.9 |
| 1970 | 67.0 | 68.9 | 49.4 | 49.5 | 73.7 | 71.8 | 23.5 | 23.7 | 78.8 | 79.5 | 35.1 | 34.4 | 33.9 | 33.3 |
| 1971 | 69.9 | 71.8 | 51.3 | 51.4 | 73.3 | 71.5 | 25.0 | 25.3 | 80.3 | 81.1 | 35.8 | 35.2 | 35.3 | 34.7 |
| 1972 | 72.2 | 74.2 | 54.7 | 54.9 | 75.7 | 74.0 | 26.6 | 26.9 | 82.7 | 83.5 | 36.8 | 36.2 | 36.5 | 35.8 |
| 1973 | 74.5 | 76.6 | 58.5 | 58.9 | 78.5 | 76.9 | 28.9 | 29.1 | 84.5 | 85.1 | 38.8 | 38.0 | 38.4 | 37.0 |
| 1974 | 73.2 | 75.3 | 57.6 | 58.0 | 78.6 | 77.0 | 31.7 | 32.0 | 83.4 | 84.2 | 43.2 | 42.4 | 42.1 | 40.8 |
| 1975 | 75.8 | 77.4 | 57.0 | 57.0 | 75.2 | 73.7 | 34.9 | 35.2 | 84.3 | 84.9 | 46.1 | 45.5 | 46.1 | 45.1 |
| 1976 | 78.5 | 80.3 | 60.9 | 61.1 | 77.6 | 76.1 | 38.0 | 38.2 | 86.8 | 87.2 | 48.4 | 47.6 | 48.5 | 47.6 |
| 1977 | 79.8 | 81.5 | 64.3 | 64.6 | 80.6 | 79.2 | 41.0 | 41.3 | 87.9 | 88.5 | 51.4 | 50.7 | 51.4 | 50.6 |
| 1978 | 80.7 | 82.6 | 68.3 | 68.8 | 84.7 | 83.3 | 44.6 | 45.0 | 89.4 | 90.2 | 55.3 | 54.5 | 55.1 | 54.1 |
| 1979 | 80.7 | 82.2 | 70.6 | 70.9 | 87.5 | 86.3 | 48.9 | 49.3 | 89.7 | 90.3 | 60.7 | 59.9 | 59.8 | 58.7 |
| 1980 | 80.4 | 82.0 | 69.8 | 70.2 | 86.8 | 85.6 | 54.2 | 54.6 | 89.4 | 90.0 | 67.4 | 66.5 | 65.2 | 64.3 |
| 1981 | 82.0 | 83.0 | 71.7 | 71.6 | 87.4 | 86.2 | 59.4 | 59.9 | 89.5 | 90.2 | 72.4 | 72.1 | 71.2 | 70.5 |
| 1982 | 81.7 | 82.5 | 69.6 | 69.4 | 85.2 | 84.1 | 63.8 | 64.3 | 90.9 | 91.6 | 78.2 | 77.9 | 75.3 | 74.8 |
| 1983 | 84.6 | 86.3 | 73.3 | 73.8 | 86.6 | 85.6 | 66.5 | 67.1 | 91.0 | 91.7 | 78.6 | 77.8 | 77.8 | 77.2 |
| 1984 | 87.0 | 88.1 | 79.7 | 80.0 | 91.6 | 90.7 | 69.5 | 70.0 | 91.3 | 92.0 | 79.8 | 79.4 | 80.0 | 79.4 |
| 1985 | 88.7 | 89.3 | 83.1 | 83.0 | 93.6 | 93.0 | 72.9 | 73.2 | 92.7 | 93.1 | 82.1 | 82.0 | 82.2 | 81.9 |
| 1986 | 91.4 | 92.0 | 86.1 | 86.2 | 94.2 | 93.8 | 76.7 | 77.0 | 95.8 | 96.3 | 83.9 | 83.7 | 83.5 | 83.2 |
| 1987 | 91.9 | 92.3 | 89.2 | 89.3 | 97.0 | 96.7 | 79.7 | 80.0 | 96.3 | 96.6 | 86.7 | 86.6 | 85.6 | 85.4 |
| 1988 | 93.0 | 93.5 | 92.9 | 93.3 | 100.0 | 99.8 | 83.5 | 83.6 | 97.3 | 97.5 | 89.8 | 89.4 | 88.3 | 87.9 |
| 1989 | 93.9 | 94.2 | 96.2 | 96.5 | 102.4 | 102.4 | 85.8 | 85.8 | 95.9 | 95.9 | 91.3 | 91.1 | 91.5 | 91.2 |
| 1990 | 95.2 | 95.3 | 97.6 | 97.8 | 102.6 | 102.7 | 90.7 | 90.5 | 96.5 | 96.3 | 95.3 | 95.0 | 94.8 | 94.5 |
| 1991 | 96.3 | 96.4 | 96.5 | 96.6 | 100.2 | 100.2 | 95.0 | 95.0 | 97.5 | 97.5 | 98.7 | 98.5 | 98.1 | 98.0 |
| 1992 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1993 | 100.5 | 100.5 | 103.1 | 103.3 | 102.6 | 102.9 | 102.5 | 102.2 | 99.9 | 99.6 | 101.9 | 101.7 | 102.2 | 102.2 |
| 1994 | 101.9 | 101.8 | 108.1 | 108.2 | 106.2 | 106.2 | 104.5 | 104.3 | 99.7 | 99.5 | 102.6 | 102.5 | 104.0 | 104.1 |
| 1995 | 102.6 | 102.8 | 111.5 | 111.8 | 108.7 | 108.8 | 106.7 | 106.6 | 99.3 | 99.2 | 104.1 | 103.7 | 106.0 | 106.1 |
| 1996 | 105.4 | 105.4 | 116.4 | 116.7 | 110.4 | 110.7 | 110.1 | 109.8 | 99.8 | 99.5 | 104.5 | 104.2 | 107.7 | 107.6 |
| 1997 | 107.8 | 107.5 | 122.5 | 122.7 | 113.6 | 114.1 | 113.5 | 113.1 | 100.7 | 100.3 | 105.3 | 105.2 | 109.7 | 109.8 |
| 1998 | 110.8 | 110.4 | 128.6 | 129.0 | 116.1 | 116.8 | 119.6 | 119.0 | 104.6 | 104.0 | 108.0 | 107.7 | 110.6 | 110.8 |
| 1999 | 113.8 | 113.2 | 134.8 | 135.1 | 118.4 | 119.3 | 125.1 | 124.2 | 107.1 | 106.4 | 109.9 | 109.7 | 111.8 | 112.3 |
| 2000 | 118.6 | 118.1 | 142.4 | 142.8 | 120.0 | 120.9 | 131.4 | 130.5 | 108.9 | 108.1 | 110.7 | 110.5 | 113.8 | 114.3 |

[1] Output is an annual-weighted index of real gross domestic product of the sector.

[2] Hours at work of all persons engaged in the sector, including hours of proprietors and unpaid family workers. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by an index of consumer prices.

[5] Current dollar gross domestic product divided by the index of real gross domestic product.

Table 25. **Changes in productivity and related data, business and nonfarm business sectors, 1948-2000**

(Percent change from previous year)

| Year | Output per hour of all persons | | Output[1] | | Hours of all persons[2] | | Compensation per hour[3] | | Real compensation per hour[4] | | Unit labor cost | | Implicit price deflator[5] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector | Business sector | Nonfarm business sector |
| 1948 | 4.6 | 2.7 | 5.4 | 4.4 | 0.8 | 1.7 | 8.5 | 8.6 | 0.4 | 0.5 | 3.7 | 5.8 | 6.2 | 6.8 |
| 1949 | 2.3 | 3.4 | -1.1 | -0.8 | -3.3 | -4.0 | 1.5 | 3.1 | 2.8 | 4.4 | -0.8 | -0.3 | -0.9 | 0.9 |
| 1950 | 8.5 | 6.9 | 9.8 | 10.2 | 1.2 | 3.1 | 7.3 | 6.2 | 6.0 | 4.8 | -1.1 | -0.7 | 1.1 | 1.1 |
| 1951 | 3.0 | 2.5 | 6.3 | 7.4 | 3.2 | 4.8 | 9.6 | 8.6 | 1.6 | 0.7 | 6.4 | 6.0 | 7.7 | 6.6 |
| 1952 | 3.1 | 2.1 | 3.2 | 3.1 | 0.1 | 1.0 | 6.3 | 5.6 | 4.3 | 3.6 | 3.1 | 3.5 | 1.1 | 1.8 |
| 1953 | 3.7 | 2.3 | 4.9 | 4.8 | 1.1 | 2.4 | 6.5 | 5.7 | 5.7 | 4.9 | 2.7 | 3.3 | 0.8 | 2.0 |
| 1954 | 2.2 | 2.0 | -1.3 | -1.6 | -3.5 | -3.5 | 3.3 | 3.3 | 2.6 | 2.6 | 1.1 | 1.3 | 0.6 | 1.0 |
| 1955 | 4.1 | 4.2 | 7.9 | 8.3 | 3.7 | 4.0 | 2.6 | 3.8 | 3.0 | 4.1 | -1.4 | -0.4 | 1.3 | 1.8 |
| 1956 | 0.1 | -0.8 | 1.6 | 1.7 | 1.5 | 2.5 | 6.6 | 6.1 | 5.1 | 4.5 | 6.5 | 6.9 | 3.2 | 3.5 |
| 1957 | 3.2 | 2.5 | 1.7 | 2.0 | -1.5 | -0.6 | 6.5 | 5.8 | 3.1 | 2.4 | 3.3 | 3.1 | 3.2 | 3.2 |
| 1958 | 2.9 | 2.3 | -1.9 | -2.1 | -4.6 | -4.3 | 4.6 | 4.1 | 1.7 | 1.2 | 1.6 | 1.8 | 1.9 | 1.6 |
| 1959 | 4.0 | 4.0 | 8.3 | 8.8 | 4.1 | 4.6 | 4.2 | 4.0 | 3.5 | 3.3 | 0.1 | 0.0 | 0.7 | 1.2 |
| 1960 | 1.9 | 1.3 | 1.9 | 1.7 | 0.0 | 0.4 | 4.3 | 4.5 | 2.6 | 2.7 | 2.4 | 3.1 | 1.1 | 1.2 |
| 1961 | 3.7 | 3.4 | 2.0 | 2.0 | -1.7 | -1.3 | 4.1 | 3.6 | 3.1 | 2.5 | 0.4 | 0.2 | 0.8 | 0.8 |
| 1962 | 4.6 | 4.5 | 6.4 | 6.8 | 1.7 | 2.2 | 4.5 | 4.0 | 3.4 | 3.0 | -0.1 | -0.5 | 1.0 | 1.0 |
| 1963 | 3.9 | 3.5 | 4.6 | 4.6 | 0.6 | 1.1 | 3.7 | 3.5 | 2.3 | 2.2 | -0.2 | 0.0 | 0.6 | 0.7 |
| 1964 | 4.6 | 4.2 | 6.4 | 6.7 | 1.7 | 2.4 | 5.1 | 4.6 | 3.8 | 3.2 | 0.5 | 0.3 | 1.1 | 1.2 |
| 1965 | 3.6 | 3.1 | 7.0 | 7.1 | 3.3 | 3.8 | 3.8 | 3.3 | 2.1 | 1.7 | 0.2 | 0.2 | 1.6 | 1.4 |
| 1966 | 4.1 | 3.5 | 6.8 | 7.2 | 2.6 | 3.6 | 6.7 | 5.8 | 3.7 | 2.9 | 2.5 | 2.2 | 2.5 | 2.3 |
| 1967 | 2.2 | 1.7 | 1.9 | 1.7 | -0.3 | -0.1 | 5.7 | 5.9 | 2.6 | 2.7 | 3.5 | 4.1 | 2.7 | 3.2 |
| 1968 | 3.1 | 3.1 | 5.0 | 5.3 | 1.8 | 2.1 | 7.7 | 7.4 | 3.4 | 3.1 | 4.4 | 4.2 | 3.9 | 3.8 |
| 1969 | 0.5 | 0.1 | 3.0 | 3.0 | 2.5 | 2.9 | 7.0 | 6.8 | 1.5 | 1.3 | 6.5 | 6.7 | 4.5 | 4.4 |
| 1970 | 2.0 | 1.5 | 0.0 | -0.1 | -2.0 | -1.6 | 7.7 | 7.2 | 1.9 | 1.4 | 5.6 | 5.6 | 4.4 | 4.5 |
| 1971 | 4.4 | 4.2 | 3.9 | 3.8 | -0.4 | -0.3 | 6.4 | 6.5 | 1.9 | 2.0 | 1.9 | 2.2 | 4.3 | 4.4 |
| 1972 | 3.3 | 3.4 | 6.6 | 6.9 | 3.3 | 3.4 | 6.2 | 6.4 | 2.9 | 3.0 | 2.8 | 2.9 | 3.3 | 2.9 |
| 1973 | 3.2 | 3.1 | 7.0 | 7.3 | 3.7 | 4.0 | 8.5 | 8.2 | 2.2 | 1.9 | 5.2 | 4.9 | 5.2 | 3.6 |
| 1974 | -1.7 | -1.6 | -1.5 | -1.5 | 0.1 | 0.1 | 9.7 | 9.8 | -1.2 | -1.1 | 11.6 | 11.6 | 9.6 | 10.2 |
| 1975 | 3.5 | 2.7 | -1.0 | -1.7 | -4.3 | -4.3 | 10.3 | 10.1 | 1.0 | 0.9 | 6.5 | 7.2 | 9.6 | 10.6 |
| 1976 | 3.6 | 3.7 | 6.8 | 7.2 | 3.1 | 3.4 | 8.8 | 8.6 | 2.9 | 2.7 | 5.1 | 4.7 | 5.2 | 5.4 |
| 1977 | 1.6 | 1.5 | 5.6 | 5.6 | 3.9 | 4.0 | 7.9 | 8.0 | 1.3 | 1.4 | 6.1 | 6.4 | 6.1 | 6.4 |
| 1978 | 1.1 | 1.3 | 6.2 | 6.5 | 5.0 | 5.1 | 8.8 | 8.9 | 1.8 | 1.9 | 7.6 | 7.6 | 7.2 | 6.8 |
| 1979 | 0.0 | -0.4 | 3.3 | 3.2 | 3.4 | 3.6 | 9.7 | 9.5 | 0.3 | 0.1 | 9.8 | 10.0 | 8.5 | 8.5 |
| 1980 | -0.3 | -0.3 | -1.1 | -1.1 | -0.9 | -0.8 | 10.8 | 10.8 | -0.3 | -0.3 | 11.1 | 11.1 | 9.1 | 9.7 |
| 1981 | 1.9 | 1.2 | 2.7 | 2.0 | 0.7 | 0.8 | 9.5 | 9.7 | 0.1 | 0.3 | 7.4 | 8.3 | 9.2 | 9.5 |
| 1982 | -0.4 | -0.6 | -2.9 | -3.1 | -2.6 | -2.5 | 7.5 | 7.5 | 1.6 | 1.5 | 8.0 | 8.1 | 5.7 | 6.2 |
| 1983 | 3.6 | 4.5 | 5.4 | 6.4 | 1.6 | 1.8 | 4.2 | 4.3 | 0.1 | 0.1 | 0.6 | -0.2 | 3.4 | 3.2 |
| 1984 | 2.8 | 2.2 | 8.8 | 8.3 | 5.8 | 6.0 | 4.4 | 4.3 | 0.4 | 0.3 | 1.5 | 2.1 | 2.9 | 2.8 |
| 1985 | 2.0 | 1.3 | 4.2 | 3.9 | 2.2 | 2.5 | 4.9 | 4.7 | 1.5 | 1.2 | 2.9 | 3.3 | 2.7 | 3.2 |
| 1986 | 3.0 | 3.0 | 3.7 | 3.8 | 0.7 | 0.8 | 5.2 | 5.2 | 3.4 | 3.4 | 2.1 | 2.1 | 1.6 | 1.7 |
| 1987 | 0.5 | 0.4 | 3.5 | 3.5 | 3.0 | 3.2 | 3.9 | 3.8 | 0.5 | 0.4 | 3.4 | 3.4 | 2.5 | 2.5 |
| 1988 | 1.2 | 1.3 | 4.3 | 4.5 | 3.0 | 3.2 | 4.8 | 4.5 | 1.1 | 0.9 | 3.5 | 3.2 | 3.1 | 3.0 |
| 1989 | 1.0 | 0.8 | 3.5 | 3.4 | 2.5 | 2.6 | 2.8 | 2.7 | -1.5 | -1.6 | 1.8 | 1.9 | 3.7 | 3.7 |
| 1990 | 1.3 | 1.1 | 1.5 | 1.4 | 0.2 | 0.3 | 5.7 | 5.5 | 0.6 | 0.4 | 4.3 | 4.3 | 3.5 | 3.6 |
| 1991 | 1.1 | 1.2 | -1.2 | -1.3 | -2.3 | -2.4 | 4.7 | 4.9 | 1.0 | 1.2 | 3.6 | 3.6 | 3.5 | 3.7 |
| 1992 | 3.9 | 3.7 | 3.7 | 3.5 | -0.2 | -0.2 | 5.3 | 5.3 | 2.6 | 2.6 | 1.4 | 1.6 | 2.0 | 2.1 |
| 1993 | 0.5 | 0.5 | 3.1 | 3.3 | 2.6 | 2.9 | 2.5 | 2.2 | -0.1 | -0.4 | 1.9 | 1.7 | 2.2 | 2.2 |
| 1994 | 1.3 | 1.3 | 4.9 | 4.7 | 3.5 | 3.3 | 2.0 | 2.1 | -0.2 | -0.1 | 0.7 | 0.8 | 1.8 | 1.9 |
| 1995 | 0.7 | 0.9 | 3.1 | 3.4 | 2.4 | 2.4 | 2.1 | 2.1 | -0.4 | -0.4 | 1.4 | 1.2 | 2.0 | 2.0 |
| 1996 | 2.8 | 2.5 | 4.4 | 4.3 | 1.6 | 1.7 | 3.2 | 3.0 | 0.4 | 0.3 | 0.4 | 0.5 | 1.6 | 1.4 |
| 1997 | 2.3 | 2.0 | 5.2 | 5.1 | 2.9 | 3.1 | 3.1 | 3.0 | 0.9 | 0.8 | 0.8 | 0.9 | 1.8 | 2.1 |
| 1998 | 2.8 | 2.7 | 5.0 | 5.1 | 2.2 | 2.4 | 5.3 | 5.2 | 3.9 | 3.8 | 2.5 | 2.5 | 0.8 | 0.9 |
| 1999 | 2.8 | 2.6 | 4.8 | 4.8 | 2.0 | 2.2 | 4.6 | 4.4 | 2.4 | 2.3 | 1.8 | 1.8 | 1.1 | 1.3 |
| 2000 | 4.2 | 4.3 | 5.6 | 5.7 | 1.3 | 1.3 | 5.0 | 5.1 | 1.6 | 1.6 | 0.8 | 0.7 | 1.8 | 1.8 |

[1] Output is an annual-weighted index of real gross domestic product of the sector.

[2] Hours at work of all persons engaged in the sector, including hours of proprietors and unpaid family workers. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by an index of consumer prices.

[5] Current dollar gross domestic product divided by the index of real gross domestic product.

NOTE: Percent changes are based on original data and therefore may differ slightly from percent changes based on indexes.

Table 26. **Private business sector: Productivity and related measures, 1948-99**[1]

(Indexes 1996=100)

| Year | Productivity | | | Output[3] | Inputs | | | Capital per hour of all persons |
|---|---|---|---|---|---|---|---|---|
| | Output per hour of all persons | Output per unit of capital | Multifactor productivity[2] | | Labor input[4] | Capital services[5] | Combined units of labor and capital inputs[6] | |
| 1948 | 31.1 | 107.8 | 51.5 | 18.6 | 51.1 | 17.3 | 36.2 | 28.8 |
| 1949 | 32.2 | 104.8 | 52.1 | 18.6 | 49.4 | 17.7 | 35.6 | 30.7 |
| 1950 | 35.0 | 111.0 | 55.9 | 20.5 | 50.3 | 18.4 | 36.6 | 31.5 |
| 1955 | 40.9 | 114.7 | 61.9 | 24.9 | 53.7 | 21.7 | 40.3 | 35.6 |
| 1960 | 45.6 | 111.1 | 65.3 | 27.5 | 54.0 | 24.8 | 42.2 | 41.1 |
| 1965 | 55.9 | 122.4 | 76.4 | 35.6 | 58.0 | 29.1 | 46.7 | 45.7 |
| 1966 | 58.2 | 123.7 | 78.7 | 38.1 | 59.5 | 30.8 | 48.3 | 47.0 |
| 1967 | 59.5 | 119.0 | 78.8 | 38.8 | 59.4 | 32.6 | 49.2 | 50.0 |
| 1968 | 61.4 | 119.8 | 80.9 | 40.7 | 60.3 | 34.0 | 50.4 | 51.2 |
| 1969 | 61.7 | 117.5 | 80.4 | 42.0 | 62.1 | 35.7 | 52.2 | 52.5 |
| 1970 | 63.0 | 112.3 | 80.3 | 42.0 | 61.0 | 37.4 | 52.3 | 56.1 |
| 1971 | 65.8 | 112.0 | 82.8 | 43.6 | 60.5 | 38.9 | 52.7 | 58.8 |
| 1972 | 68.0 | 114.6 | 85.3 | 46.5 | 62.6 | 40.6 | 54.6 | 59.3 |
| 1973 | 70.2 | 116.1 | 87.6 | 49.8 | 64.8 | 42.9 | 56.9 | 60.4 |
| 1974 | 69.0 | 108.4 | 84.4 | 49.0 | 65.2 | 45.2 | 58.1 | 63.6 |
| 1975 | 71.5 | 103.4 | 85.2 | 48.5 | 62.4 | 46.9 | 57.0 | 69.1 |
| 1976 | 74.1 | 107.1 | 88.4 | 51.9 | 64.2 | 48.4 | 58.7 | 69.1 |
| 1977 | 75.2 | 108.9 | 89.8 | 54.8 | 66.8 | 50.3 | 61.0 | 69.1 |
| 1978 | 76.1 | 110.9 | 91.0 | 58.2 | 70.2 | 52.5 | 64.0 | 68.6 |
| 1979 | 76.0 | 109.1 | 90.6 | 60.2 | 72.4 | 55.1 | 66.4 | 69.6 |
| 1980 | 75.8 | 102.7 | 88.6 | 59.4 | 71.9 | 57.9 | 67.1 | 73.8 |
| 1981 | 77.3 | 100.5 | 88.8 | 61.0 | 73.0 | 60.8 | 68.8 | 76.9 |
| 1982 | 77.2 | 93.6 | 86.1 | 59.3 | 71.7 | 63.3 | 68.9 | 82.4 |
| 1983 | 79.9 | 95.7 | 88.5 | 62.5 | 73.4 | 65.3 | 70.6 | 83.4 |
| 1984 | 82.2 | 99.7 | 91.4 | 68.1 | 77.7 | 68.3 | 74.5 | 82.4 |
| 1985 | 83.9 | 99.2 | 92.4 | 71.0 | 79.6 | 71.5 | 76.9 | 84.6 |
| 1986 | 86.5 | 98.8 | 93.8 | 73.6 | 80.5 | 74.6 | 78.5 | 87.6 |
| 1987 | 87.0 | 98.9 | 94.1 | 76.3 | 83.1 | 77.1 | 81.1 | 88.0 |
| 1988 | 88.1 | 100.2 | 94.7 | 79.6 | 86.3 | 79.4 | 84.0 | 87.9 |
| 1989 | 89.0 | 100.8 | 95.3 | 82.4 | 88.9 | 81.8 | 86.5 | 88.3 |
| 1990 | 90.2 | 99.5 | 95.4 | 83.6 | 89.4 | 84.0 | 87.6 | 90.6 |
| 1991 | 91.3 | 96.3 | 94.5 | 82.6 | 88.3 | 85.8 | 87.5 | 94.8 |
| 1992 | 94.8 | 97.8 | 96.6 | 85.7 | 89.3 | 87.6 | 88.7 | 96.9 |
| 1993 | 95.4 | 98.6 | 97.1 | 88.5 | 91.8 | 89.8 | 91.1 | 96.7 |
| 1994 | 96.6 | 100.3 | 98.1 | 92.8 | 95.6 | 92.5 | 94.6 | 96.3 |
| 1995 | 97.3 | 99.7 | 98.4 | 95.8 | 98.0 | 96.0 | 97.3 | 97.6 |
| 1996 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1997 | 102.2 | 100.3 | 101.2 | 105.2 | 103.5 | 104.9 | 104.0 | 101.9 |
| 1998 | 105.1 | 99.6 | 102.6 | 110.6 | 106.1 | 111.0 | 107.7 | 105.5 |
| 1999 | 107.9 | 98.1 | 103.5 | 115.8 | 108.9 | 118.1 | 111.9 | 110.0 |

[1] The private business sector includes all of gross domestic product except the output of general government, government enterprises, non-profit institutions, the rental value of owner-occupied real estate and the output of paid employees of private households.

[2] Output per unit of combined labor and capital inputs.

[3] Gross domestic product originating in the sector, superlative chained index.

[4] Index of the hours at work of all persons including employees, proprietors, and unpaid family workers classified by education, work experience and gender. This superlative chain index is computed by combining changes in the hours of each education, experience and gender group weighted by each group's share of labor compensation.

[5] A measure of the flow of capital services used in the sector.

[6] Labor input combined with capital input, using labor's and capital's shares of costs as weights to form a superlative chain index.

Source: Output data are from the Bureau of Economic Analysis (BEA), U.S. Department of Commerce, and modified by the Bureau of Labor Statistics (BLS), U.S. Department of Labor. Compensation and hours data are from the BLS. Capital measures are based on data supplied by BEA and the U.S. Department of Agriculture.

## Table 27. **Productivity and related data: Nonfinancial corporate sector, 1958-2000**

(Index, 1992=100, and percent change from preceding year)

| Year | Output per hour of all persons | | Output[1] | | Employee hours[2] | | Compensation per hour[3] | | Real compensation per hour[4] | | Unit labor cost | | Implicit price deflator[5] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year |
| 1958 | 51.8 | - | 25.5 | - | 49.3 | - | 14.4 | - | 64.7 | - | 27.8 | - | 28.4 | - |
| 1959 | 54.4 | 5.0 | 28.4 | 11.3 | 52.3 | 6.0 | 14.9 | 3.7 | 66.7 | 3.0 | 27.5 | -1.1 | 28.6 | 0.8 |
| 1960 | 55.4 | 1.8 | 29.4 | 3.3 | 53.0 | 1.4 | 15.6 | 4.2 | 68.3 | 2.4 | 28.1 | 2.3 | 28.8 | 0.7 |
| 1961 | 57.3 | 3.4 | 30.0 | 2.2 | 52.4 | -1.2 | 16.1 | 3.5 | 70.0 | 2.5 | 28.1 | 0.1 | 28.9 | 0.4 |
| 1962 | 59.7 | 4.1 | 32.5 | 8.3 | 54.5 | 4.0 | 16.7 | 3.8 | 71.9 | 2.8 | 28.0 | -0.3 | 29.1 | 0.8 |
| 1963 | 61.7 | 3.5 | 34.4 | 5.9 | 55.8 | 2.3 | 17.2 | 3.0 | 73.1 | 1.7 | 27.9 | -0.4 | 29.3 | 0.5 |
| 1964 | 64.1 | 3.8 | 36.9 | 7.0 | 57.5 | 3.1 | 18.0 | 4.2 | 75.2 | 2.9 | 28.0 | 0.3 | 29.6 | 0.9 |
| 1965 | 65.8 | 2.6 | 39.9 | 8.3 | 60.7 | 5.5 | 18.5 | 3.0 | 76.3 | 1.4 | 28.1 | 0.4 | 30.0 | 1.5 |
| 1966 | 66.7 | 1.4 | 42.7 | 7.0 | 64.0 | 5.5 | 19.5 | 5.3 | 78.1 | 2.4 | 29.2 | 3.9 | 30.7 | 2.4 |
| 1967 | 67.7 | 1.5 | 43.8 | 2.6 | 64.7 | 1.1 | 20.6 | 5.5 | 80.0 | 2.4 | 30.4 | 4.0 | 31.5 | 2.6 |
| 1968 | 70.0 | 3.5 | 46.6 | 6.4 | 66.5 | 2.8 | 22.1 | 7.6 | 82.6 | 3.3 | 31.6 | 4.0 | 32.7 | 3.8 |
| 1969 | 70.0 | 0.1 | 48.4 | 4.0 | 69.2 | 3.9 | 23.6 | 6.8 | 83.6 | 1.2 | 33.7 | 6.7 | 34.1 | 4.4 |
| 1970 | 70.4 | 0.5 | 48.0 | -1.0 | 68.2 | -1.5 | 25.3 | 7.0 | 84.6 | 1.2 | 35.9 | 6.5 | 35.6 | 4.4 |
| 1971 | 73.3 | 4.2 | 49.9 | 4.0 | 68.0 | -0.2 | 26.9 | 6.3 | 86.2 | 1.8 | 36.7 | 2.0 | 37.0 | 3.8 |
| 1972 | 75.3 | 2.7 | 53.8 | 7.9 | 71.5 | 5.1 | 28.4 | 5.8 | 88.3 | 2.5 | 37.8 | 3.0 | 38.1 | 3.0 |
| 1973 | 76.1 | 1.1 | 57.0 | 5.9 | 74.9 | 4.8 | 30.7 | 8.0 | 89.8 | 1.7 | 40.4 | 6.9 | 40.3 | 5.9 |
| 1974 | 74.4 | -2.1 | 56.0 | -1.7 | 75.2 | 0.4 | 33.6 | 9.6 | 88.6 | -1.3 | 45.2 | 12.0 | 44.4 | 10.0 |
| 1975 | 77.2 | 3.8 | 55.1 | -1.6 | 71.3 | -5.1 | 37.0 | 9.9 | 89.3 | 0.7 | 47.9 | 5.9 | 48.8 | 9.9 |
| 1976 | 79.7 | 3.2 | 59.5 | 7.9 | 74.6 | 4.6 | 40.0 | 8.3 | 91.4 | 2.4 | 50.2 | 4.9 | 51.0 | 4.6 |
| 1977 | 81.6 | 2.4 | 63.8 | 7.3 | 78.2 | 4.8 | 43.1 | 7.8 | 92.5 | 1.2 | 52.9 | 5.3 | 53.8 | 5.4 |
| 1978 | 82.1 | 0.6 | 68.1 | 6.7 | 82.9 | 6.0 | 46.8 | 8.5 | 93.8 | 1.5 | 57.0 | 7.8 | 57.4 | 6.8 |
| 1979 | 81.5 | -0.7 | 70.2 | 3.1 | 86.1 | 3.9 | 51.1 | 9.3 | 93.7 | -0.1 | 62.7 | 10.1 | 62.0 | 8.0 |
| 1980 | 81.1 | -0.5 | 69.2 | -1.4 | 85.3 | -0.9 | 56.4 | 10.4 | 93.1 | -0.7 | 69.6 | 10.9 | 68.4 | 10.3 |
| 1981 | 82.6 | 1.9 | 71.5 | 3.3 | 86.5 | 1.4 | 61.6 | 9.2 | 92.9 | -0.2 | 74.6 | 7.2 | 75.3 | 10.1 |
| 1982 | 83.4 | 0.9 | 70.0 | -2.1 | 83.9 | -3.0 | 66.0 | 7.2 | 94.1 | 1.3 | 79.2 | 6.2 | 79.6 | 5.7 |
| 1983 | 85.9 | 3.1 | 73.3 | 4.8 | 85.3 | 1.6 | 68.4 | 3.6 | 93.5 | -0.6 | 79.6 | 0.5 | 81.1 | 1.8 |
| 1984 | 88.2 | 2.6 | 80.2 | 9.5 | 91.0 | 6.7 | 71.2 | 4.1 | 93.6 | 0.1 | 80.7 | 1.5 | 83.2 | 2.7 |
| 1985 | 89.9 | 2.0 | 83.8 | 4.5 | 93.2 | 2.5 | 74.4 | 4.5 | 94.6 | 1.1 | 82.7 | 2.5 | 84.5 | 1.5 |
| 1986 | 91.7 | 1.9 | 85.9 | 2.4 | 93.7 | 0.5 | 78.0 | 4.8 | 97.5 | 3.0 | 85.1 | 2.8 | 85.5 | 1.2 |
| 1987 | 94.7 | 3.3 | 90.7 | 5.6 | 95.8 | 2.2 | 81.7 | 4.7 | 98.7 | 1.2 | 86.2 | 1.3 | 87.0 | 1.8 |
| 1988 | 95.9 | 1.3 | 95.8 | 5.6 | 99.9 | 4.2 | 84.2 | 3.1 | 98.1 | -0.6 | 87.7 | 1.8 | 89.4 | 2.7 |
| 1989 | 94.7 | -1.2 | 97.4 | 1.7 | 102.8 | 2.9 | 86.3 | 2.6 | 96.5 | -1.7 | 91.1 | 3.8 | 92.5 | 3.5 |
| 1990 | 95.4 | 0.7 | 98.3 | 0.9 | 103.0 | 0.2 | 90.8 | 5.2 | 96.7 | 0.2 | 95.2 | 4.5 | 95.8 | 3.6 |
| 1991 | 97.7 | 2.3 | 97.5 | -0.8 | 99.8 | -3.1 | 95.3 | 4.9 | 97.8 | 1.2 | 97.5 | 2.5 | 98.3 | 2.6 |
| 1992 | 100.0 | 2.4 | 100.0 | 2.6 | 100.0 | 0.2 | 100.0 | 5.0 | 100.0 | 2.3 | 100.0 | 2.5 | 100.0 | 1.8 |
| 1993 | 100.7 | 0.7 | 103.0 | 3.0 | 102.3 | 2.3 | 102.0 | 2.0 | 99.5 | -0.5 | 101.3 | 1.3 | 102.1 | 2.1 |
| 1994 | 103.1 | 2.4 | 109.6 | 6.4 | 106.3 | 3.9 | 104.2 | 2.1 | 99.4 | -0.1 | 101.0 | -0.3 | 103.7 | 1.6 |
| 1995 | 104.2 | 1.0 | 114.2 | 4.2 | 109.6 | 3.1 | 106.2 | 1.9 | 98.8 | -0.6 | 101.9 | 0.8 | 105.1 | 1.4 |
| 1996 | 107.5 | 3.2 | 119.9 | 5.0 | 111.5 | 1.8 | 109.0 | 2.6 | 98.7 | -0.1 | 101.4 | -0.5 | 105.5 | 0.4 |
| 1997 | 108.4 | 0.9 | 127.0 | 5.9 | 117.1 | 5.0 | 110.3 | 1.3 | 97.8 | -0.9 | 101.8 | 0.4 | 106.2 | 0.7 |
| 1998 | 112.3 | 3.5 | 134.9 | 6.3 | 120.2 | 2.6 | 115.9 | 5.0 | 101.3 | 3.6 | 103.2 | 1.4 | 106.6 | 0.3 |
| 1999 | 116.2 | 3.5 | 142.9 | 5.9 | 123.0 | 2.3 | 121.1 | 4.5 | 103.7 | 2.3 | 104.2 | 1.0 | 107.4 | 0.8 |
| 2000 | 121.1 | 4.2 | 151.6 | 6.1 | 125.2 | 1.8 | 126.8 | 4.8 | 105.1 | 1.4 | 104.8 | 0.6 | 108.8 | 1.2 |

[1] Output is an annual-weighted index of real gross domestic product originating in the sector.

[2] Hours at work of all employees engaged in the sector. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans.

[4] Hourly compensation divided by an index of consumer prices.

[5] Current dollar gross domestic product divided by the index of real gross domestic product.

NOTE: Percent changes are based on original data and therefore may differ slightly from percent changes based on indexes.

Dash indicates data not available.

Table 28. **Productivity and related data: Manufacturing sector, 1949-2000**

(Index, 1992=100, and percent change from preceding year)

| Year | Output per hour of all persons | | Output[1] | | Hours of all persons[2] | | Compensation per hour[3] | | Real compensation per hour[4] | | Unit labor cost | | Implicit price deflator[5] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year | Index | Change from previous year |
| 1949 | 33.5 | - | 26.5 | - | 79.1 | - | 8.3 | - | 45.1 | - | 24.6 | - | 24.0 | - |
| 1950 | 34.0 | 1.5 | 29.1 | 9.7 | 85.5 | 8.1 | 8.7 | 5.1 | 46.8 | 3.7 | 25.5 | 3.5 | 24.5 | 2.3 |
| 1951 | 33.8 | -0.7 | 31.1 | 7.0 | 92.1 | 7.7 | 9.5 | 10.1 | 47.7 | 2.0 | 28.3 | 10.8 | 26.8 | 9.2 |
| 1952 | 35.2 | 4.2 | 32.9 | 5.6 | 93.3 | 1.3 | 10.2 | 6.6 | 49.9 | 4.6 | 28.9 | 2.3 | 26.7 | -0.4 |
| 1953 | 36.4 | 3.2 | 35.7 | 8.5 | 98.1 | 5.1 | 10.7 | 5.5 | 52.2 | 4.7 | 29.5 | 2.2 | 26.6 | -0.3 |
| 1954 | 37.3 | 2.6 | 33.4 | -6.3 | 89.6 | -8.6 | 11.2 | 4.6 | 54.2 | 3.8 | 30.1 | 1.9 | 27.0 | 1.4 |
| 1955 | 38.8 | 4.0 | 36.7 | 9.7 | 94.6 | 5.5 | 11.7 | 3.9 | 56.5 | 4.3 | 30.1 | -0.1 | 27.2 | 0.8 |
| 1956 | 38.6 | -0.4 | 37.1 | 1.0 | 96.0 | 1.5 | 12.4 | 6.4 | 59.3 | 4.9 | 32.1 | 6.9 | 28.1 | 3.5 |
| 1957 | 39.4 | 2.0 | 37.2 | 0.4 | 94.5 | -1.6 | 13.2 | 6.0 | 60.8 | 2.6 | 33.4 | 3.9 | 29.2 | 3.6 |
| 1958 | 40.0 | 1.6 | 34.7 | -6.8 | 86.6 | -8.3 | 13.8 | 4.6 | 61.8 | 1.7 | 34.4 | 3.0 | 29.9 | 2.5 |
| 1959 | 40.9 | 2.2 | 37.8 | 9.1 | 92.5 | 6.7 | 14.3 | 3.7 | 63.7 | 3.0 | 34.9 | 1.5 | 30.3 | 1.3 |
| 1960 | 41.8 | 2.1 | 38.5 | 1.7 | 92.1 | -0.4 | 14.9 | 4.2 | 65.2 | 2.4 | 35.6 | 2.0 | 30.2 | -0.2 |
| 1961 | 42.8 | 2.5 | 38.4 | -0.2 | 89.7 | -2.6 | 15.3 | 2.9 | 66.5 | 1.9 | 35.7 | 0.5 | 30.3 | 0.2 |
| 1962 | 44.2 | 3.2 | 41.3 | 7.5 | 93.4 | 4.1 | 15.9 | 3.8 | 68.3 | 2.8 | 36.0 | 0.6 | 30.3 | 0.1 |
| 1963 | 45.7 | 3.5 | 43.1 | 4.5 | 94.4 | 1.0 | 16.4 | 3.0 | 69.4 | 1.7 | 35.8 | -0.4 | 30.3 | 0.0 |
| 1964 | 47.4 | 3.8 | 45.7 | 6.0 | 96.4 | 2.1 | 17.0 | 4.2 | 71.4 | 2.8 | 36.0 | 0.4 | 30.3 | 0.2 |
| 1965 | 48.5 | 2.4 | 49.5 | 8.3 | 102.0 | 5.8 | 17.4 | 2.1 | 71.8 | 0.5 | 35.9 | -0.2 | 30.7 | 1.1 |
| 1966 | 49.1 | 1.1 | 53.3 | 7.7 | 108.6 | 6.5 | 18.2 | 4.5 | 73.0 | 1.6 | 37.1 | 3.4 | 31.5 | 2.8 |
| 1967 | 50.9 | 3.7 | 54.9 | 3.1 | 108.0 | -0.6 | 19.2 | 5.5 | 74.6 | 2.3 | 37.7 | 1.7 | 32.0 | 1.5 |
| 1968 | 52.7 | 3.5 | 57.7 | 5.1 | 109.6 | 1.5 | 20.7 | 7.7 | 77.1 | 3.3 | 39.2 | 4.0 | 32.7 | 2.2 |
| 1969 | 53.5 | 1.7 | 59.4 | 2.9 | 110.9 | 1.2 | 22.2 | 7.3 | 78.5 | 1.7 | 41.4 | 5.5 | 33.8 | 3.3 |
| 1970 | 54.2 | 1.1 | 56.5 | -4.8 | 104.4 | -5.9 | 23.7 | 7.1 | 79.4 | 1.3 | 43.8 | 5.8 | 35.0 | 3.4 |
| 1971 | 57.8 | 6.8 | 58.2 | 2.9 | 100.5 | -3.7 | 25.2 | 6.1 | 80.7 | 1.6 | 43.5 | -0.7 | 36.2 | 3.6 |
| 1972 | 60.3 | 4.2 | 63.3 | 8.9 | 105.1 | 4.5 | 26.5 | 5.2 | 82.3 | 1.9 | 43.9 | 0.9 | 37.4 | 3.4 |
| 1973 | 61.4 | 1.9 | 67.8 | 7.1 | 110.4 | 5.1 | 28.5 | 7.7 | 83.4 | 1.4 | 46.4 | 5.6 | 40.3 | 7.7 |
| 1974 | 61.2 | -0.3 | 66.1 | -2.5 | 107.9 | -2.2 | 31.6 | 11.0 | 83.4 | 0.0 | 51.7 | 11.4 | 47.3 | 17.3 |
| 1975 | 64.3 | 5.0 | 62.5 | -5.5 | 97.2 | -9.9 | 35.5 | 12.1 | 85.6 | 2.7 | 55.2 | 6.7 | 53.0 | 11.9 |
| 1976 | 67.0 | 4.2 | 68.2 | 9.2 | 101.9 | 4.8 | 38.4 | 8.4 | 87.7 | 2.5 | 57.4 | 4.1 | 55.3 | 4.3 |
| 1977 | 69.7 | 4.0 | 73.9 | 8.4 | 106.1 | 4.2 | 41.8 | 8.7 | 89.6 | 2.1 | 60.0 | 4.5 | 58.7 | 6.2 |
| 1978 | 70.4 | 1.0 | 77.8 | 5.2 | 110.6 | 4.2 | 45.2 | 8.1 | 90.6 | 1.1 | 64.2 | 7.0 | 62.7 | 6.8 |
| 1979 | 69.8 | -0.8 | 78.7 | 1.1 | 112.7 | 2.0 | 49.6 | 9.8 | 90.9 | 0.4 | 71.1 | 10.7 | 69.8 | 11.5 |
| 1980 | 70.1 | 0.4 | 75.3 | -4.2 | 107.5 | -4.6 | 55.6 | 12.0 | 91.6 | 0.8 | 79.3 | 11.6 | 79.9 | 14.4 |
| 1981 | 70.7 | 0.9 | 75.6 | 0.4 | 107.0 | -0.5 | 61.1 | 9.9 | 92.1 | 0.5 | 86.3 | 8.9 | 87.1 | 9.1 |
| 1982 | 74.2 | 5.0 | 72.7 | -3.9 | 97.9 | -8.4 | 67.0 | 9.7 | 95.4 | 3.6 | 90.2 | 4.5 | 89.6 | 2.8 |
| 1983 | 76.7 | 3.3 | 75.9 | 4.4 | 98.9 | 1.0 | 68.8 | 2.8 | 94.1 | -1.3 | 89.7 | -0.6 | 90.0 | 0.4 |
| 1984 | 79.5 | 3.6 | 83.7 | 10.3 | 105.3 | 6.5 | 71.2 | 3.5 | 93.6 | -0.5 | 89.6 | -0.1 | 91.5 | 1.6 |
| 1985 | 82.3 | 3.6 | 86.0 | 2.8 | 104.6 | -0.7 | 75.1 | 5.5 | 95.5 | 2.0 | 91.3 | 1.8 | 91.0 | -0.6 |
| 1986 | 85.9 | 4.4 | 88.5 | 2.8 | 103.0 | -1.5 | 78.5 | 4.5 | 98.1 | 2.7 | 91.3 | 0.1 | 87.5 | -3.9 |
| 1987 | 88.3 | 2.8 | 91.6 | 3.6 | 103.8 | 0.8 | 80.7 | 2.9 | 97.5 | -0.5 | 91.4 | 0.1 | 89.2 | 2.0 |
| 1988 | 90.2 | 2.2 | 96.1 | 4.9 | 106.6 | 2.7 | 84.0 | 4.1 | 97.9 | 0.4 | 93.1 | 1.9 | 91.8 | 2.9 |
| 1989 | 90.3 | 0.1 | 96.6 | 0.5 | 107.1 | 0.5 | 86.6 | 3.2 | 96.8 | -1.1 | 96.0 | 3.1 | 95.6 | 4.1 |
| 1990 | 92.9 | 2.9 | 97.3 | 0.7 | 104.8 | -2.1 | 90.8 | 4.8 | 96.6 | -0.2 | 97.8 | 1.9 | 99.0 | 3.6 |
| 1991 | 95.0 | 2.3 | 95.4 | -2.0 | 100.4 | -4.2 | 95.6 | 5.3 | 98.1 | 1.5 | 100.6 | 2.9 | 99.6 | 0.6 |
| 1992 | 100.0 | 5.3 | 100.0 | 4.8 | 100.0 | -0.4 | 100.0 | 4.6 | 100.0 | 1.9 | 100.0 | -0.6 | 100.0 | 0.4 |
| 1993 | 101.9 | 1.9 | 103.3 | 3.3 | 101.4 | 1.4 | 102.7 | 2.7 | 100.2 | 0.2 | 100.8 | 0.8 | 100.9 | 0.9 |
| 1994 | 105.0 | 3.0 | 108.7 | 5.3 | 103.6 | 2.2 | 105.6 | 2.8 | 100.8 | 0.6 | 100.7 | -0.2 | 102.0 | 1.1 |
| 1995 | 109.0 | 3.8 | 113.4 | 4.3 | 104.0 | 0.4 | 107.9 | 2.1 | 100.4 | -0.4 | 99.0 | -1.7 | 103.9 | 1.8 |
| 1996 | 112.8 | 3.5 | 117.0 | 3.1 | 103.7 | -0.3 | 109.3 | 1.3 | 99.0 | -1.4 | 96.9 | -2.1 | 104.9 | 1.0 |
| 1997 | 117.6 | 4.3 | 124.1 | 6.1 | 105.5 | 1.7 | 111.4 | 1.9 | 98.8 | -0.2 | 94.7 | -2.3 | 104.1 | -0.7 |
| 1998 | 124.0 | 5.4 | 130.4 | 5.1 | 105.2 | -0.3 | 117.3 | 5.3 | 102.6 | 3.8 | 94.6 | -0.1 | 100.5 | -3.5 |
| 1999 | 129.6 | 4.5 | 135.2 | 3.7 | 104.3 | -0.8 | 122.0 | 4.0 | 104.5 | 1.9 | 94.1 | -0.5 | 101.1 | 0.6 |
| 2000 | 138.5 | 6.9 | 142.9 | 5.7 | 103.2 | -1.1 | 128.4 | 5.2 | 106.4 | 1.8 | 92.7 | -1.6 | - | - |

[1] Output is an annual-weighted index of real gross sectoral product.

[2] Hours at work of all persons engaged in the sector, including hours of proprietors. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by an index of consumer prices.

[5] Current dollar sectoral product divided by the index of real sectoral product.

NOTE: Percent changes are based on original data and therefore may differ slightly from percent changes based on indexes.

Dash indicates data not available.

## Table 29. Annual Indexes of output per hour for selected 3-digit SIC Industries, 1993-99

(Index, 1987=100)

| Industry | SIC code[1] | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Average annual percent change 1990-99[2] |
|---|---|---|---|---|---|---|---|---|---|
| **Mining** | | | | | | | | | |
| Copper ores | 102 | 118.1 | 126.0 | 117.2 | 116.5 | 118.9 | 118.3 | 105.5 | 0.3 |
| Gold and silver ores | 104 | 159.8 | 160.8 | 144.2 | 138.3 | 158.5 | 187.6 | 200.0 | 5.6 |
| Bituminous coal and lignite mining | 122 | 141.2 | 148.1 | 155.9 | 168.0 | 176.6 | 188.0 | 192.2 | 5.5 |
| Crude petroleum and natural gas | 131 | 105.9 | 112.4 | 119.4 | 123.9 | 125.2 | 127.4 | 132.3 | 3.5 |
| Crushed and broken stone | 142 | 103.6 | 108.7 | 105.4 | 107.2 | 112.6 | 110.2 | 104.8 | 0.3 |
| **Manufacturing** | | | | | | | | | |
| Meat products | 201 | 104.3 | 101.2 | 102.3 | 97.4 | 102.5 | 102.3 | 102.2 | 0.6 |
| Dairy products | 202 | 109.6 | 111.8 | 116.4 | 116.0 | 119.3 | 119.3 | 114.1 | 0.7 |
| Preserved fruits and vegetables | 203 | 106.8 | 107.6 | 109.1 | 109.2 | 110.7 | 117.8 | 120.0 | 2.6 |
| Grain mill products | 204 | 109.2 | 108.4 | 115.4 | 108.0 | 118.2 | 126.2 | 130.4 | 2.4 |
| Bakery products | 205 | 94.4 | 96.4 | 97.3 | 95.6 | 99.1 | 100.8 | 107.5 | 1.7 |
| Sugar and confectionery products | 206 | 104.5 | 106.2 | 108.3 | 113.8 | 116.7 | 123.0 | 130.0 | 2.6 |
| Fats and oils | 207 | 112.6 | 111.8 | 120.3 | 110.1 | 120.2 | 137.3 | 156.1 | 3.1 |
| Beverages | 208 | 126.4 | 130.1 | 133.5 | 135.0 | 135.5 | 136.4 | 132.4 | 1.4 |
| Miscellaneous food and kindred products | 209 | 105.2 | 100.9 | 102.9 | 109.1 | 104.1 | 112.7 | 116.3 | 1.8 |
| Cigarettes | 211 | 106.5 | 126.6 | 142.9 | 147.2 | 147.2 | 152.2 | 135.8 | 2.0 |
| Broadwoven fabric mills, cotton | 221 | 117.8 | 122.1 | 134.0 | 137.3 | 131.2 | 136.2 | 138.7 | 3.4 |
| Broadwoven fabric mills, manmade | 222 | 131.7 | 142.5 | 145.3 | 147.6 | 162.2 | 168.6 | 171.9 | 5.0 |
| Narrow fabric mills | 224 | 111.4 | 120.1 | 118.9 | 126.3 | 110.8 | 117.7 | 122.4 | 2.7 |
| Knitting mills | 225 | 127.9 | 134.1 | 138.3 | 150.3 | 138.0 | 135.9 | 144.8 | 3.4 |
| Textile finishing, except wool | 226 | 79.3 | 81.2 | 78.5 | 79.2 | 94.3 | 99.1 | 101.0 | 2.1 |
| Carpets and rugs | 227 | 97.1 | 93.3 | 95.8 | 100.2 | 100.3 | 102.3 | 97.8 | 0.5 |
| Yarn and thread mills | 228 | 126.6 | 130.7 | 137.4 | 147.4 | 150.4 | 153.0 | 169.5 | 4.9 |
| Miscellaneous textile goods | 229 | 110.4 | 118.5 | 123.7 | 123.1 | 118.7 | 120.1 | 127.0 | 1.7 |
| Men's and boys' furnishings | 232 | 108.4 | 111.7 | 123.4 | 134.7 | 162.1 | 174.7 | 187.0 | 7.0 |
| Women's and misses' outerwear | 233 | 121.8 | 127.4 | 135.5 | 141.6 | 149.9 | 151.9 | 174.5 | 5.9 |
| Women's and children's undergarments | 234 | 124.5 | 138.0 | 161.3 | 174.5 | 208.9 | 216.4 | 293.0 | 12.4 |
| Hats, caps, and millinery | 235 | 87.2 | 77.7 | 84.3 | 82.2 | 87.1 | 99.5 | 108.7 | 2.2 |
| Miscellaneous apparel and accessories | 238 | 94.0 | 105.5 | 116.8 | 120.1 | 101.4 | 107.7 | 105.8 | 1.7 |
| Miscellaneous fabricated textile products | 239 | 108.5 | 107.8 | 109.2 | 105.6 | 119.2 | 117.2 | 129.2 | 2.9 |
| Sawmills and planing mills | 242 | 101.9 | 103.3 | 110.2 | 115.6 | 116.9 | 118.7 | 125.4 | 2.6 |
| Millwork, plywood, and structural members | 243 | 97.0 | 94.5 | 92.7 | 92.4 | 89.1 | 91.3 | 90.7 | -0.9 |
| Wood containers | 244 | 100.1 | 100.9 | 106.1 | 106.7 | 106.2 | 106.6 | 105.0 | -0.6 |
| Wood buildings and mobile homes | 245 | 103.8 | 98.3 | 97.0 | 96.7 | 100.3 | 99.2 | 96.8 | -0.7 |
| Miscellaneous wood products | 249 | 115.3 | 111.8 | 115.4 | 114.4 | 123.4 | 131.2 | 141.3 | 3.1 |
| Household furniture | 251 | 110.6 | 112.5 | 116.9 | 121.6 | 121.3 | 125.8 | 128.7 | 2.3 |
| Office furniture | 252 | 103.2 | 100.5 | 101.1 | 106.4 | 118.3 | 113.1 | 109.8 | 1.6 |
| Public building and related furniture | 253 | 161.0 | 157.4 | 173.3 | 181.5 | 214.9 | 207.6 | 210.9 | 6.5 |
| Partitions and fixtures | 254 | 107.4 | 98.9 | 101.2 | 97.5 | 121.1 | 125.6 | 127.0 | 3.2 |
| Miscellaneous furniture and fixtures | 259 | 103.6 | 104.7 | 110.0 | 113.2 | 110.7 | 121.9 | 122.7 | 1.9 |
| Pulp mills | 261 | 122.5 | 128.9 | 131.9 | 132.6 | 82.3 | 86.6 | 88.4 | -3.0 |
| Paper mills | 262 | 102.4 | 110.2 | 118.6 | 111.6 | 112.0 | 114.9 | 122.7 | 2.0 |
| Paperboard mills | 263 | 108.4 | 114.9 | 119.5 | 118.0 | 126.7 | 127.8 | 131.0 | 3.0 |
| Paperboard containers and boxes | 265 | 107.9 | 108.4 | 105.1 | 106.3 | 109.7 | 113.5 | 113.5 | 1.3 |
| Miscellaneous converted paper products | 267 | 107.9 | 110.6 | 113.3 | 113.6 | 119.5 | 122.9 | 127.3 | 2.6 |
| Newspapers | 271 | 79.4 | 79.9 | 79.0 | 77.4 | 79.0 | 83.6 | 86.3 | -0.5 |

See notes at end of table.

Table 29. **Annual Indexes of output per hour for selected 3-digit SIC Industries, 1993-99—Continued**

(Index, 1987=100)

| Industry | SIC code[1] | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Average annual percent change 1990-99[2] |
|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing—Continued** | | | | | | | | | |
| Periodicals | 272 | 89.5 | 81.9 | 87.8 | 89.1 | 100.1 | 115.0 | 115.1 | 2.3 |
| Books | 273 | 103.5 | 103.0 | 101.6 | 99.3 | 102.6 | 101.0 | 105.4 | 1.0 |
| Miscellaneous publishing | 274 | 104.5 | 97.5 | 94.8 | 93.6 | 114.5 | 119.5 | 128.3 | 3.7 |
| Commercial printing | 275 | 106.9 | 106.5 | 107.2 | 108.3 | 108.8 | 109.9 | 115.2 | 1.3 |
| Manifold business forms | 276 | 91.1 | 82.0 | 76.9 | 75.2 | 77.9 | 76.7 | 73.6 | -2.6 |
| Greeting cards | 277 | 91.4 | 89.0 | 92.5 | 90.8 | 92.2 | 104.2 | 103.9 | 0.4 |
| Blankbooks and bookbinding | 278 | 98.7 | 105.4 | 108.7 | 114.5 | 114.2 | 116.4 | 123.3 | 2.4 |
| Printing trade services | 279 | 115.3 | 111.0 | 116.7 | 126.2 | 123.3 | 126.7 | 120.5 | 2.2 |
| Industrial inorganic chemicals | 281 | 105.6 | 102.3 | 109.3 | 110.1 | 116.8 | 145.8 | 170.7 | 5.3 |
| Plastics materials and synthetics | 282 | 112.0 | 125.3 | 128.3 | 125.3 | 135.4 | 142.2 | 145.7 | 4.2 |
| Drugs | 283 | 99.7 | 104.6 | 108.7 | 112.5 | 112.4 | 104.3 | 104.8 | 0.1 |
| Soaps, cleaners, and toilet goods | 284 | 108.7 | 111.2 | 118.6 | 120.9 | 126.4 | 122.7 | 116.8 | 1.3 |
| Paints and allied products | 285 | 108.8 | 116.7 | 118.0 | 125.6 | 126.4 | 126.8 | 125.6 | 1.9 |
| Industrial organic chemicals | 286 | 92.2 | 99.9 | 98.6 | 99.0 | 111.2 | 105.7 | 111.3 | 1.0 |
| Agricultural chemicals | 287 | 103.8 | 105.0 | 108.5 | 110.0 | 119.8 | 117.5 | 106.9 | 0.2 |
| Miscellaneous chemical products | 289 | 107.1 | 105.7 | 107.8 | 110.1 | 120.3 | 120.6 | 128.1 | 3.1 |
| Petroleum refining | 291 | 120.1 | 123.8 | 132.3 | 142.0 | 149.2 | 155.7 | 169.5 | 5.0 |
| Asphalt paving and roofing materials | 295 | 108.0 | 104.9 | 111.2 | 113.1 | 123.1 | 124.7 | 115.7 | 1.9 |
| Miscellaneous petroleum and coal products | 299 | 104.2 | 96.3 | 87.4 | 87.1 | 96.5 | 98.5 | 90.7 | -0.5 |
| Tires and inner tubes | 301 | 116.5 | 124.1 | 131.1 | 138.8 | 149.1 | 144.2 | 145.5 | 3.9 |
| Hose and belting and gaskets and packing | 305 | 99.7 | 102.7 | 104.6 | 107.4 | 113.5 | 112.7 | 114.0 | 1.9 |
| Fabricated rubber products, n.e.c | 306 | 123.1 | 119.1 | 121.5 | 121.0 | 125.3 | 132.3 | 140.8 | 2.9 |
| Miscellaneous plastics products, n.e.c | 308 | 116.7 | 120.8 | 121.0 | 124.7 | 129.9 | 133.8 | 141.2 | 3.3 |
| Footwear, except rubber | 314 | 105.2 | 113.0 | 117.1 | 126.1 | 121.4 | 110.9 | 131.6 | 3.0 |
| Flat glass | 321 | 97.7 | 97.6 | 99.6 | 101.5 | 107.6 | 114.0 | 127.7 | 4.7 |
| Glass and glassware, pressed or blown | 322 | 108.7 | 112.9 | 115.7 | 121.4 | 128.3 | 135.2 | 143.6 | 3.6 |
| Products of purchased glass | 323 | 106.2 | 105.9 | 106.1 | 122.0 | 125.1 | 122.0 | 134.0 | 4.2 |
| Cement, hydraulic | 324 | 119.9 | 125.6 | 124.3 | 128.7 | 133.1 | 134.1 | 139.6 | 2.4 |
| Structural clay products | 325 | 106.8 | 114.0 | 112.6 | 119.6 | 111.9 | 114.8 | 124.0 | 1.4 |
| Pottery and related products | 326 | 100.3 | 108.4 | 109.3 | 119.3 | 123.2 | 127.1 | 120.8 | 2.3 |
| Concrete, gypsum, and plaster products | 327 | 104.6 | 101.5 | 104.5 | 107.3 | 107.6 | 112.8 | 114.4 | 1.3 |
| Miscellaneous nonmetallic mineral products | 329 | 104.5 | 106.3 | 107.8 | 110.4 | 114.6 | 114.7 | 114.6 | 2.1 |
| Blast furnace and basic steel products | 331 | 133.6 | 142.4 | 142.6 | 147.5 | 155.0 | 151.0 | 148.9 | 3.5 |
| Iron and steel foundries | 332 | 112.1 | 113.0 | 112.7 | 116.2 | 120.8 | 121.1 | 126.2 | 1.9 |
| Primary nonferrous metals | 333 | 107.9 | 105.3 | 111.0 | 110.8 | 112.0 | 125.8 | 131.2 | 2.8 |
| Nonferrous rolling and drawing | 335 | 98.3 | 101.2 | 99.2 | 104.0 | 111.3 | 115.2 | 122.7 | 3.2 |
| Nonferrous foundries (castings) | 336 | 108.5 | 112.1 | 117.8 | 122.3 | 127.0 | 131.5 | 130.8 | 2.6 |
| Miscellaneous primary metal products | 339 | 111.3 | 134.5 | 152.2 | 149.6 | 136.2 | 140.0 | 150.4 | 3.2 |
| Metal cans and shipping containers | 341 | 132.3 | 140.9 | 144.2 | 155.2 | 160.3 | 163.8 | 160.3 | 3.5 |
| Cutlery, handtools, and hardware | 342 | 104.0 | 109.2 | 111.3 | 118.2 | 114.6 | 115.7 | 123.9 | 2.7 |
| Plumbing and heating, except electric | 343 | 102.0 | 109.1 | 109.2 | 118.6 | 127.3 | 130.3 | 126.9 | 2.4 |
| Fabricated structural metal products | 344 | 104.8 | 107.7 | 105.8 | 106.5 | 111.9 | 112.7 | 112.7 | 1.5 |
| Metal forgings and stampings | 346 | 108.7 | 108.5 | 109.3 | 113.6 | 120.2 | 125.9 | 130.3 | 3.5 |
| Metal services, n.e.c | 347 | 120.6 | 123.0 | 127.7 | 128.4 | 124.4 | 127.3 | 127.9 | 2.3 |
| Ordnance and accessories, n.e.c | 348 | 84.6 | 83.6 | 87.6 | 87.5 | 93.7 | 96.6 | 92.2 | 1.3 |

See notes at end of table.

## Table 29. **Annual Indexes of output per hour for selected 3-digit SIC Industries, 1993-99—Continued**

(Index, 1987=100)

| Industry | SIC code[1] | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Average annual percent change 1990-99[2] |
|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing—Continued** | | | | | | | | | |
| Miscellaneous fabricated metal products | 349 | 102.0 | 103.2 | 106.6 | 108.3 | 107.7 | 111.5 | 110.3 | 1.4 |
| Engines and turbines | 351 | 109.2 | 122.3 | 122.7 | 136.6 | 136.9 | 145.9 | 151.2 | 4.0 |
| Farm and garden machinery | 352 | 118.6 | 125.0 | 134.7 | 137.2 | 141.2 | 148.5 | 125.5 | 0.8 |
| Construction and related machinery | 353 | 108.2 | 117.7 | 122.1 | 123.3 | 132.5 | 137.5 | 137.2 | 2.8 |
| Metalworking machinery | 354 | 107.4 | 109.9 | 114.8 | 114.9 | 119.2 | 119.8 | 123.5 | 2.3 |
| Special industry machinery | 355 | 113.6 | 121.2 | 132.3 | 134.0 | 131.7 | 125.1 | 139.3 | 2.9 |
| General industrial machinery | 356 | 104.8 | 106.7 | 109.0 | 109.4 | 110.0 | 111.2 | 111.4 | 1.0 |
| Computer and office equipment | 357 | 258.6 | 328.6 | 469.4 | 681.3 | 960.2 | 1350.6 | 1840.2 | 33.3 |
| Refrigeration and service machinery | 358 | 108.6 | 110.7 | 112.7 | 114.7 | 115.0 | 121.4 | 123.2 | 1.9 |
| Industrial machinery, n.e.c | 359 | 118.5 | 127.4 | 138.8 | 141.4 | 129.3 | 127.5 | 134.3 | 2.5 |
| Electric distribution equipment | 361 | 122.2 | 131.8 | 143.0 | 143.9 | 142.8 | 147.5 | 146.6 | 3.6 |
| Electrical industrial apparatus | 362 | 132.9 | 134.9 | 150.8 | 154.3 | 164.2 | 162.3 | 162.9 | 4.7 |
| Household appliances | 363 | 123.4 | 131.4 | 127.3 | 127.4 | 142.9 | 150.3 | 150.2 | 4.0 |
| Electric lighting and wiring equipment | 364 | 107.8 | 113.4 | 113.7 | 116.9 | 121.8 | 129.2 | 132.4 | 3.2 |
| Communications equipment | 366 | 163.0 | 186.4 | 200.6 | 229.5 | 275.3 | 276.0 | 327.1 | 11.4 |
| Electronic components and accessories | 367 | 217.9 | 274.1 | 401.5 | 514.9 | 613.4 | 768.0 | 1070.0 | 26.0 |
| Miscellaneous electrical equipment & supplies | 369 | 108.2 | 110.5 | 114.1 | 123.1 | 128.3 | 135.3 | 140.7 | 5.0 |
| Motor vehicles and equipment | 371 | 106.2 | 108.8 | 106.7 | 107.2 | 116.3 | 125.2 | 136.5 | 3.2 |
| Aircraft and parts | 372 | 115.2 | 109.6 | 107.9 | 113.0 | 114.7 | 140.1 | 139.6 | 3.9 |
| Ship and boat building and repairing | 373 | 106.2 | 103.8 | 98.0 | 99.2 | 105.3 | 102.0 | 112.6 | 0.9 |
| Railroad equipment | 374 | 151.0 | 152.5 | 150.0 | 148.3 | 184.2 | 189.1 | 205.1 | 4.2 |
| Motorcycles, bicycles, and parts | 375 | 130.9 | 125.1 | 120.3 | 125.5 | 120.4 | 127.7 | 121.4 | 2.9 |
| Guided missiles, space vehicles, parts | 376 | 122.1 | 118.9 | 121.0 | 129.4 | 136.5 | 142.4 | 158.2 | 3.5 |
| Search and navigation equipment | 381 | 129.1 | 132.1 | 149.5 | 142.2 | 149.5 | 149.1 | 139.7 | 2.4 |
| Measuring and controlling devices | 382 | 124.0 | 133.8 | 146.4 | 150.5 | 142.4 | 143.5 | 152.9 | 4.1 |
| Medical instruments and supplies | 384 | 127.3 | 126.7 | 131.5 | 139.8 | 147.4 | 158.6 | 160.2 | 3.6 |
| Ophthalmic goods | 385 | 157.8 | 160.6 | 167.2 | 188.2 | 196.3 | 199.1 | 229.5 | 7.4 |
| Photographic equipment & supplies | 386 | 126.9 | 132.7 | 129.5 | 128.7 | 121.5 | 124.8 | 147.2 | 3.5 |
| Jewelry, silverware, and plated ware | 391 | 96.7 | 99.5 | 100.2 | 102.6 | 114.2 | 113.1 | 133.9 | 3.4 |
| Musical instruments | 393 | 95.6 | 88.7 | 86.9 | 78.8 | 82.9 | 81.4 | 86.4 | -1.3 |
| Toys and sporting goods | 394 | 114.2 | 109.7 | 113.6 | 119.9 | 125.7 | 131.6 | 124.0 | 1.5 |
| Pens, pencils, office, and art supplies | 395 | 111.6 | 129.9 | 135.2 | 144.1 | 127.5 | 132.5 | 129.3 | 1.0 |
| Costume jewelry and notions | 396 | 115.8 | 129.0 | 143.7 | 142.2 | 118.0 | 131.2 | 150.2 | 4.0 |
| Miscellaneous manufactures | 399 | 107.7 | 106.1 | 108.1 | 112.8 | 109.4 | 108.5 | 111.2 | 0.5 |
| **Transportation** | | | | | | | | | |
| Railroad transportation | 4011 | 145.4 | 150.3 | 156.2 | 167.0 | 169.8 | 173.3 | 182.3 | 4.9 |
| Trucking, except local [3] | 4213 | 126.6 | 129.5 | 125.4 | 130.9 | 132.4 | 129.9 | 131.6 | 1.9 |
| U.S. postal service [4] | 431 | 107.1 | 106.6 | 106.5 | 104.7 | 108.3 | 109.7 | 110.3 | 0.7 |
| Air transportation [3] | 4512,13,22 (pts.) | 100.2 | 105.7 | 108.6 | 111.1 | 111.6 | 110.7 | 108.3 | 1.7 |

See notes at end of table.

## Table 29. **Annual Indexes of output per hour for selected 3-digit SIC Industries, 1993-99—Continued**

(Index, 1987=100)

| Industry | SIC code[1] | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Average annual percent change 1990-99[2] |
|---|---|---|---|---|---|---|---|---|---|
| **Utitlities** | | | | | | | | | |
| Telephone communications .... | 481 | 135.5 | 142.2 | 148.1 | 159.5 | 160.9 | 170.3 | 189.1 | 5.9 |
| Radio and television broadcasting .......................... | 483 | 106.7 | 110.1 | 109.6 | 105.8 | 101.1 | 100.7 | 101.8 | -0.3 |
| Cable and other pay TV services ............................... | 484 | 85.3 | 83.4 | 84.5 | 81.9 | 84.7 | 83.5 | 81.5 | -1.4 |
| Electric utilities ........................ | 491,3 (pt.) | 120.6 | 126.8 | 135.0 | 146.5 | 150.5 | 160.1 | 162.7 | 4.4 |
| Gas utilities ............................ | 492,3 (pt.) | 121.8 | 125.6 | 137.1 | 145.9 | 158.6 | 144.4 | 145.0 | 3.6 |
| **Trade** | | | | | | | | | |
| Lumber and other building materials dealers .................. | 521 | 111.4 | 118.9 | 117.8 | 121.6 | 121.8 | 134.2 | 142.3 | 3.5 |
| Paint, glass, and wallpaper stores .................... | 523 | 114.2 | 127.8 | 130.9 | 133.5 | 134.8 | 163.5 | 163.2 | 4.8 |
| Hardware stores .................... | 525 | 113.9 | 121.2 | 115.5 | 119.5 | 119.0 | 137.8 | 149.3 | 2.9 |
| Retail nurseries, lawn and garden supply stores ............ | 526 | 107.1 | 117.0 | 117.4 | 136.4 | 127.5 | 133.7 | 151.2 | 6.7 |
| Department stores .................. | 531 | 110.4 | 113.4 | 115.9 | 123.5 | 128.8 | 135.5 | 147.4 | 4.8 |
| Variety stores .......................... | 533 | 191.5 | 197.4 | 211.3 | 238.4 | 257.7 | 268.7 | 319.5 | 8.4 |
| Miscellaneous general merchandise stores .............. | 539 | 164.2 | 164.8 | 167.3 | 167.6 | 170.3 | 185.7 | 195.2 | 5.7 |
| Grocery stores ........................ | 541 | 96.0 | 95.4 | 93.9 | 92.1 | 91.7 | 92.2 | 95.4 | -0.1 |
| Meat and fish (seafood) markets .................................. | 542 | 97.7 | 95.7 | 94.4 | 86.4 | 90.8 | 95.7 | 99.3 | 0.0 |
| Retail bakeries ....................... | 546 | 86.5 | 85.3 | 83.0 | 75.9 | 67.6 | 68.1 | 83.8 | -0.9 |
| New and used car dealers ...... | 551 | 108.6 | 109.7 | 108.1 | 109.1 | 108.8 | 108.7 | 111.9 | 0.5 |
| Auto and home supply stores . | 553 | 100.8 | 105.3 | 109.1 | 108.2 | 108.1 | 113.0 | 116.0 | 1.3 |
| Gasoline service stations ........ | 554 | 115.9 | 121.1 | 127.2 | 126.1 | 126.1 | 133.9 | 140.6 | 3.5 |
| Men's and boy's wear stores ... | 561 | 119.5 | 121.8 | 121.4 | 129.8 | 136.3 | 145.2 | 154.6 | 3.3 |
| Women's clothing stores ......... | 562 | 130.0 | 130.4 | 139.9 | 154.2 | 157.3 | 176.1 | 190.5 | 6.7 |
| Family clothing stores ............ | 565 | 121.5 | 127.7 | 141.8 | 146.9 | 150.2 | 153.1 | 156.5 | 4.2 |
| Shoe stores ............................ | 566 | 117.3 | 130.7 | 139.2 | 151.9 | 148.4 | 145.0 | 151.1 | 3.8 |
| Furniture and homefurnishings stores ................................. | 571 | 113.3 | 114.7 | 117.4 | 123.6 | 124.2 | 127.2 | 134.1 | 2.8 |
| Household appliance stores ... | 572 | 118.0 | 121.5 | 138.4 | 140.7 | 153.5 | 181.4 | 183.9 | 6.5 |
| Radio, television, computer, and music stores .................. | 573 | 154.5 | 179.1 | 199.3 | 208.1 | 218.4 | 260.3 | 314.6 | 11.2 |
| Eating and drinking places ...... | 581 | 103.8 | 102.1 | 102.0 | 100.6 | 101.6 | 102.0 | 104.3 | 0.0 |
| Drug and proprietary stores .... | 591 | 109.5 | 109.9 | 111.1 | 113.9 | 119.7 | 125.6 | 129.8 | 2.2 |
| Liquor stores .......................... | 592 | 101.8 | 100.1 | 104.7 | 113.8 | 109.9 | 116.5 | 114.6 | 0.9 |
| Used merchandise stores ....... | 593 | 116.8 | 119.5 | 120.6 | 132.7 | 140.3 | 163.6 | 181.9 | 6.5 |
| Miscellaneous shopping goods stores ......................... | 594 | 111.5 | 117.1 | 123.1 | 125.3 | 129.1 | 138.8 | 145.2 | 3.4 |
| Nonstore retailers .................. | 596 | 132.2 | 149.0 | 152.4 | 173.3 | 186.5 | 208.0 | 222.2 | 8.0 |
| Fuel dealers ........................... | 598 | 91.8 | 99.0 | 111.4 | 112.4 | 109.0 | 105.8 | 115.1 | 3.5 |
| Retail stores, n.e.c ................... | 599 | 118.1 | 125.8 | 127.0 | 140.2 | 147.8 | 157.3 | 161.0 | 3.9 |
| **Finance and Services** | | | | | | | | | |
| Commercial banks ................. | 602 | 118.5 | 121.7 | 126.4 | 129.7 | 133.0 | 132.6 | 135.2 | 2.6 |
| Hotels and motels ................. | 701 | 106.5 | 109.9 | 110.5 | 110.0 | 108.2 | 111.6 | 113.5 | 1.8 |
| Laundry, cleaning, and garment services .................. | 721 | 99.9 | 105.0 | 106.6 | 109.8 | 109.0 | 116.2 | 121.8 | 2.0 |
| Photographic studios, portrait . | 722 | 101.8 | 108.3 | 116.2 | 110.7 | 114.1 | 121.6 | 105.1 | 0.8 |
| Beauty shops .......................... | 723 | 97.0 | 101.1 | 104.8 | 107.6 | 108.5 | 110.5 | 113.3 | 1.7 |
| Barber shops ........................... | 724 | 121.9 | 118.8 | 115.7 | 128.8 | 150.4 | 157.4 | 138.0 | 3.6 |
| Funeral services and crematories ........................... | 726 | 98.7 | 104.3 | 100.2 | 97.6 | 101.9 | 104.2 | 99.7 | 1.0 |
| Automotive repair shops ......... | 753 | 105.7 | 114.3 | 121.6 | 116.1 | 117.2 | 124.9 | 127.6 | 1.9 |
| Motion picture theaters ........... | 783 | 113.8 | 110.4 | 105.0 | 104.1 | 103.4 | 106.1 | 110.5 | -0.7 |

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[1] 1987 Standard Industrial Classification.

[2] Average annual percent change based on compound rate formula.

[3] Refers to output per employee.

[4] Refers to ouput per full-time equivalent employee year on fiscal basis.

n.e.c. = not elesewhere classified

## Table 30. **Average weekly earnings of production workers on private nonfarm payrolls by major industry division, annual averages, 1947-2000**

(In current dollars)

| Year | Total private | Mining | Construction | Manufacturing | Transportation and public utilities | Wholesale trade | Retail trade | Finance, insurance, and real estate | Services |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | $45.58 | $59.89 | $58.83 | $49.13 | – | $50.06 | $33.77 | $43.21 | – |
| 1948 | 49.00 | 65.52 | 65.23 | 53.08 | – | 53.59 | 36.22 | 45.48 | – |
| 1949 | 50.24 | 62.33 | 67.56 | 53.80 | – | 55.45 | 38.42 | 47.63 | – |
| 1950 | 53.13 | 67.16 | 69.68 | 58.28 | – | 55.31 | 39.71 | 47.50 | – |
| 1951 | 57.86 | 74.11 | 76.96 | 63.34 | – | 62.02 | 42.82 | 54.67 | – |
| 1952 | 60.65 | 77.59 | 82.86 | 66.75 | – | 65.53 | 43.38 | 57.08 | – |
| 1953 | 63.76 | 83.03 | 86.41 | 70.47 | – | 68.61 | 45.36 | 59.57 | – |
| 1954 | 64.52 | 82.60 | 88.54 | 70.49 | – | 71.28 | 47.04 | 62.04 | – |
| 1955 | 67.72 | 89.54 | 90.90 | 75.30 | – | 74.48 | 48.75 | 63.92 | – |
| 1956 | 70.74 | 95.06 | 96.38 | 78.78 | – | 78.17 | 50.18 | 65.68 | – |
| 1957 | 73.33 | 98.25 | 100.27 | 81.19 | – | 81.41 | 52.20 | 67.53 | – |
| 1958 | 75.08 | 96.08 | 103.78 | 82.32 | – | 84.02 | 54.10 | 70.12 | – |
| 1959 | 78.78 | 103.68 | 108.41 | 88.26 | – | 88.51 | 56.15 | 72.74 | – |
| 1960 | 80.67 | 105.04 | 112.67 | 89.72 | – | 90.72 | 57.76 | 75.14 | – |
| 1961 | 82.60 | 106.92 | 118.08 | 92.34 | – | 93.56 | 58.66 | 77.12 | – |
| 1962 | 85.91 | 110.70 | 122.47 | 96.56 | – | 96.22 | 60.96 | 80.94 | – |
| 1963 | 88.46 | 114.40 | 127.19 | 99.23 | – | 99.47 | 62.66 | 84.38 | – |
| 1964 | 91.33 | 117.74 | 132.06 | 102.97 | $118.78 | 102.56 | 64.75 | 85.79 | $70.03 |
| 1965 | 95.45 | 123.52 | 138.38 | 107.53 | 125.14 | 106.08 | 66.61 | 88.91 | 73.60 |
| 1966 | 98.82 | 130.24 | 146.26 | 112.19 | 128.13 | 111.11 | 68.57 | 92.13 | 77.04 |
| 1967 | 101.84 | 135.89 | 154.95 | 114.49 | 130.82 | 115.66 | 70.95 | 95.72 | 80.38 |
| 1968 | 107.73 | 142.71 | 164.49 | 122.51 | 138.85 | 121.90 | 74.95 | 101.75 | 83.97 |
| 1969 | 114.61 | 154.80 | 181.54 | 129.51 | 147.74 | 129.85 | 78.66 | 108.70 | 90.57 |
| 1970 | 119.83 | 164.40 | 195.45 | 133.33 | 155.93 | 136.86 | 82.47 | 112.67 | 96.66 |
| 1971 | 127.31 | 172.14 | 211.67 | 142.44 | 168.82 | 143.42 | 87.62 | 117.85 | 103.06 |
| 1972 | 136.90 | 189.14 | 221.19 | 154.71 | 187.86 | 151.69 | 91.85 | 122.98 | 110.85 |
| 1973 | 145.39 | 201.40 | 235.89 | 166.46 | 203.31 | 159.54 | 96.32 | 129.20 | 117.29 |
| 1974 | 154.76 | 219.14 | 249.25 | 176.80 | 217.48 | 169.94 | 102.68 | 137.61 | 126.00 |
| 1975 | 163.53 | 249.31 | 266.08 | 190.79 | 233.44 | 182.19 | 108.86 | 148.19 | 134.67 |
| 1976 | 175.45 | 273.90 | 283.73 | 209.32 | 256.71 | 194.27 | 114.60 | 155.43 | 143.52 |
| 1977 | 189.00 | 301.20 | 295.65 | 228.90 | 278.90 | 209.13 | 121.66 | 165.26 | 153.45 |
| 1978 | 203.70 | 332.88 | 318.69 | 249.27 | 302.80 | 228.14 | 130.20 | 178.00 | 163.67 |
| 1979 | 219.91 | 365.07 | 342.99 | 269.34 | 325.58 | 247.93 | 138.62 | 190.77 | 175.27 |
| 1980 | 235.10 | 397.06 | 367.78 | 288.62 | 351.25 | 266.88 | 147.38 | 209.60 | 190.71 |
| 1981 | 255.20 | 438.75 | 399.26 | 318.00 | 382.18 | 290.68 | 158.03 | 229.05 | 208.97 |
| 1982 | 267.26 | 459.88 | 426.82 | 330.26 | 402.48 | 309.46 | 163.85 | 245.44 | 225.59 |
| 1983 | 280.70 | 479.40 | 442.97 | 354.08 | 420.81 | 328.79 | 171.05 | 263.90 | 239.04 |
| 1984 | 292.86 | 503.58 | 458.51 | 374.03 | 438.13 | 341.88 | 174.33 | 278.50 | 247.43 |
| 1985 | 299.09 | 519.93 | 464.46 | 386.37 | 450.30 | 351.36 | 174.64 | 289.02 | 256.75 |
| 1986 | 304.85 | 525.81 | 466.75 | 396.01 | 458.64 | 357.72 | 176.08 | 304.30 | 265.85 |
| 1987 | 312.50 | 531.70 | 480.44 | 406.31 | 471.58 | 365.38 | 178.70 | 316.90 | 275.93 |
| 1988 | 322.02 | 541.44 | 495.73 | 418.81 | 467.57 | 380.24 | 183.62 | 325.25 | 289.49 |
| 1989 | 334.24 | 570.18 | 513.17 | 429.68 | 481.43 | 394.82 | 188.72 | 341.17 | 305.79 |
| 1990 | 345.35 | 603.29 | 526.01 | 441.86 | 496.13 | 411.10 | 194.40 | 356.93 | 319.48 |
| 1991 | 353.98 | 630.04 | 533.40 | 455.03 | 502.92 | 424.82 | 198.48 | 370.92 | 331.45 |
| 1992 | 363.61 | 638.31 | 537.70 | 469.86 | 514.37 | 435.10 | 205.06 | 387.36 | 342.55 |
| 1993 | 373.64 | 646.78 | 553.63 | 486.04 | 532.52 | 448.47 | 209.95 | 406.33 | 350.35 |
| 1994 | 385.86 | 666.62 | 573.00 | 506.94 | 547.07 | 463.10 | 216.46 | 423.51 | 358.80 |
| 1995 | 394.34 | 683.91 | 587.00 | 514.59 | 556.72 | 476.07 | 221.47 | 442.29 | 369.04 |
| 1996 | 406.61 | 707.59 | 603.33 | 531.23 | 572.22 | 492.92 | 230.11 | 459.52 | 382.00 |
| 1997 | 424.89 | 733.21 | 625.56 | 553.14 | 592.32 | 516.48 | 240.74 | 481.57 | 400.33 |
| 1998 | 442.19 | 742.35 | 646.13 | 562.53 | 604.75 | 538.88 | 253.46 | 512.15 | 418.58 |
| 1999 | 456.78 | 736.56 | 672.13 | 579.63 | 607.20 | 558.80 | 263.61 | 529.24 | 435.86 |
| 2000 | 474.38 | 743.04 | 702.68 | 598.21 | 626.09 | 585.20 | 273.39 | 547.04 | 454.86 |

Dash indicates data not available.

NOTE: Current estimates are projected from March 2000 benchmark levels.

## Table 31. **Median weekly earnings of full-time wage and salary workers by age, sex, race, and Hispanic origin, annual averages, 1983-2000**

(In current dollars)

| Characteristic | 1983 | 1984 | 1985 | 1986[1] | 1987 | 1988 | 1989 | 1990[1] | 1991 | 1992 | 1993 | 1994[1] | 1995 | 1996 | 1997[1] | 1998[1] | 1999[1] | 2000[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total, 16 years and over | $313 | $326 | $343 | $358 | $373 | $385 | $399 | $412 | $426 | $440 | $459 | $467 | $479 | $490 | $503 | $523 | $549 | $576 |
| 16 to 24 years | 210 | 217 | 223 | 231 | 242 | 249 | 259 | 269 | 277 | 276 | 282 | 286 | 292 | 298 | 306 | 319 | 341 | 361 |
| 16 to 19 years | 163 | 168 | 173 | 178 | 185 | 195 | 204 | 209 | 213 | 212 | 214 | 221 | 231 | 240 | 252 | 268 | 281 | 294 |
| 20 to 24 years | 222 | 230 | 240 | 248 | 258 | 265 | 276 | 285 | 291 | 290 | 297 | 300 | 306 | 312 | 321 | 339 | 363 | 383 |
| 25 years and over | 343 | 361 | 378 | 391 | 403 | 414 | 427 | 449 | 467 | 479 | 491 | 500 | 510 | 520 | 540 | 572 | 592 | 611 |
| 25 to 54 years | 344 | 362 | 379 | 391 | 403 | 414 | 429 | 450 | 468 | 479 | 492 | 501 | 511 | 521 | 541 | 571 | 592 | 612 |
| 25 to 34 years | 321 | 335 | 349 | 360 | 373 | 383 | 394 | 407 | 415 | 422 | 436 | 439 | 451 | 463 | 481 | 502 | 518 | 550 |
| 35 to 44 years | 369 | 389 | 405 | 418 | 435 | 449 | 472 | 486 | 498 | 503 | 517 | 537 | 550 | 559 | 579 | 597 | 611 | 631 |
| 45 to 54 years | 366 | 385 | 400 | 415 | 429 | 452 | 472 | 489 | 507 | 522 | 542 | 566 | 582 | 594 | 607 | 620 | 652 | 671 |
| 55 years and over | 337 | 356 | 374 | 389 | 398 | 411 | 420 | 440 | 457 | 472 | 483 | 490 | 502 | 518 | 534 | 579 | 589 | 603 |
| 55 to 64 years | 346 | 365 | 380 | 396 | 405 | 419 | 431 | 457 | 469 | 483 | 492 | 501 | 514 | 535 | 558 | 592 | 604 | 617 |
| 65 years and over | 260 | 271 | 296 | 298 | 310 | 323 | 334 | 343 | 381 | 378 | 393 | 384 | 389 | 384 | 393 | 405 | 404 | 442 |
| Men | 378 | 391 | 406 | 419 | 433 | 449 | 468 | 481 | 493 | 501 | 510 | 522 | 538 | 557 | 579 | 598 | 618 | 646 |
| Women | 252 | 265 | 277 | 290 | 303 | 315 | 328 | 346 | 366 | 380 | 393 | 399 | 406 | 418 | 431 | 456 | 473 | 491 |
| White, both sexes | 319 | 336 | 355 | 370 | 383 | 394 | 409 | 424 | 442 | 458 | 475 | 484 | 494 | 506 | 519 | 545 | 573 | 591 |
| Men | 387 | 400 | 417 | 433 | 450 | 465 | 482 | 494 | 506 | 514 | 524 | 547 | 566 | 580 | 595 | 615 | 638 | 669 |
| Women | 254 | 268 | 281 | 294 | 307 | 318 | 334 | 353 | 373 | 387 | 401 | 408 | 415 | 428 | 444 | 468 | 483 | 500 |
| Black, both sexes | 261 | 269 | 277 | 291 | 301 | 314 | 319 | 329 | 348 | 357 | 369 | 371 | 383 | 387 | 400 | 426 | 445 | 468 |
| Men | 293 | 302 | 304 | 318 | 326 | 347 | 348 | 361 | 375 | 380 | 392 | 400 | 411 | 412 | 432 | 468 | 488 | 503 |
| Women | 231 | 241 | 252 | 263 | 275 | 288 | 301 | 308 | 323 | 335 | 348 | 346 | 355 | 362 | 375 | 400 | 409 | 429 |
| Hispanic origin, both sexes | (2) | (2) | (2) | 277 | 284 | 290 | 298 | 304 | 312 | 322 | 331 | 324 | 329 | 339 | 351 | 370 | 385 | 396 |
| Men | (2) | (2) | (2) | 299 | 306 | 307 | 315 | 318 | 323 | 339 | 346 | 343 | 350 | 356 | 371 | 390 | 406 | 414 |
| Women | (2) | (2) | (2) | 241 | 251 | 260 | 269 | 278 | 292 | 302 | 313 | 305 | 305 | 316 | 318 | 337 | 348 | 364 |

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[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

[2] Data not available.

## Table 32. **Median weekly earnings of full-time wage and salary workers 25 years and older by sex and educational attainment, annual averages, selected years, 1995-2000**

(In current dollars)

| Characteristic | 1995 | 1996 | 1997[1] | 1998[1] | 1999[1] | 2000[1] |
|---|---|---|---|---|---|---|
| **TOTAL** | | | | | | |
| Total, 25 years and over | $510 | $520 | $540 | $572 | $592 | $611 |
| Less than a high school diploma | 309 | 317 | 321 | 337 | 346 | 360 |
| High school graduates, no college | 432 | 443 | 461 | 479 | 490 | 506 |
| Some college or associate degree | 508 | 518 | 535 | 558 | 580 | 598 |
| College graduates, total | 747 | 758 | 779 | 821 | 860 | 896 |
| **Men** | | | | | | |
| Total, 25 years and over | 588 | 599 | 615 | 639 | 668 | 700 |
| Less than a high school diploma | 347 | 357 | 365 | 383 | 395 | 409 |
| High school graduates, no college | 507 | 516 | 535 | 559 | 580 | 594 |
| Some college or associate degree | 596 | 604 | 621 | 643 | 665 | 699 |
| College graduates, total | 845 | 874 | 896 | 939 | 977 | 1,022 |
| **Women** | | | | | | |
| Total, 25 years and over | 428 | 444 | 462 | 485 | 497 | 515 |
| Less than a high school diploma | 262 | 268 | 275 | 283 | 290 | 303 |
| High school graduates, no college | 356 | 365 | 378 | 396 | 405 | 421 |
| Some college or associate degree | 427 | 442 | 459 | 476 | 488 | 504 |
| College graduates, total | 644 | 657 | 672 | 707 | 740 | 760 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Table 33. **Producer price indexes for major commodity groups, 1947-2000**

(1982=100)

| Year | Farm products, processed foods and feeds | Farm products | Processed foods and feeds | Industrial commodities | Textile products and apparel | Hides, skins, leather, and products | Fuels and related products and power[1] | Chemicals and allied products[1] | Rubber and plastic products |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 37.9 | 45.1 | 33.0 | 22.7 | 50.6 | 31.7 | 11.1 | 32.1 | 29.2 |
| 1948 | 40.8 | 48.5 | 35.3 | 24.6 | 52.8 | 32.1 | 13.1 | 32.8 | 30.2 |
| 1949 | 36.0 | 41.9 | 32.1 | 24.1 | 48.3 | 30.4 | 12.4 | 30.0 | 29.2 |
| 1950 | 37.7 | 44.0 | 33.2 | 25.0 | 50.2 | 32.9 | 12.6 | 30.4 | 35.6 |
| 1951 | 43.0 | 51.2 | 36.9 | 27.6 | 56.0 | 37.7 | 13.0 | 34.8 | 43.7 |
| 1952 | 41.3 | 48.4 | 36.4 | 26.9 | 50.5 | 30.5 | 13.0 | 33.0 | 39.6 |
| 1953 | 38.6 | 43.8 | 34.8 | 27.2 | 49.3 | 31.0 | 13.4 | 33.4 | 36.9 |
| 1954 | 38.5 | 43.2 | 35.4 | 27.2 | 48.2 | 29.5 | 13.2 | 33.8 | 37.5 |
| 1955 | 36.6 | 40.5 | 33.8 | 27.8 | 48.2 | 29.4 | 13.2 | 33.7 | 42.4 |
| 1956 | 36.4 | 40.0 | 33.8 | 29.1 | 48.2 | 31.2 | 13.6 | 33.9 | 43.0 |
| 1957 | 37.7 | 41.1 | 34.8 | 29.9 | 48.3 | 31.2 | 14.3 | 34.6 | 42.8 |
| 1958 | 39.4 | 42.9 | 36.5 | 30.0 | 47.4 | 31.6 | 13.7 | 34.9 | 42.8 |
| 1959 | 37.6 | 40.2 | 35.6 | 30.5 | 48.1 | 35.9 | 13.7 | 34.8 | 42.6 |
| 1960 | 37.7 | 40.1 | 35.6 | 30.5 | 48.6 | 34.6 | 13.9 | 34.8 | 42.7 |
| 1961 | 37.7 | 39.7 | 36.2 | 30.4 | 47.8 | 34.9 | 14.0 | 34.5 | 41.1 |
| 1962 | 38.1 | 40.4 | 36.5 | 30.4 | 48.2 | 35.3 | 14.0 | 33.9 | 39.9 |
| 1963 | 37.7 | 39.6 | 36.8 | 30.3 | 48.2 | 34.3 | 13.9 | 33.5 | 40.1 |
| 1964 | 37.5 | 39.0 | 36.7 | 30.5 | 48.5 | 34.4 | 13.5 | 33.6 | 39.6 |
| 1965 | 39.0 | 40.7 | 38.0 | 30.9 | 48.8 | 35.9 | 13.8 | 33.9 | 39.7 |
| 1966 | 41.6 | 43.7 | 40.2 | 31.5 | 48.9 | 39.4 | 14.1 | 34.0 | 40.5 |
| 1967 | 40.2 | 41.3 | 39.8 | 32.0 | 48.9 | 38.1 | 14.4 | 34.2 | 41.4 |
| 1968 | 41.1 | 42.3 | 40.6 | 32.8 | 50.7 | 39.3 | 14.3 | 34.1 | 42.8 |
| 1969 | 43.4 | 45.0 | 42.7 | 33.9 | 51.8 | 41.5 | 14.6 | 34.2 | 43.6 |
| 1970 | 44.9 | 45.8 | 44.6 | 35.2 | 52.4 | 42.0 | 15.3 | 35.0 | 44.9 |
| 1971 | 45.8 | 46.6 | 45.5 | 36.5 | 53.3 | 43.4 | 16.6 | 35.6 | 45.2 |
| 1972 | 49.2 | 51.6 | 48.0 | 37.8 | 55.5 | 50.0 | 17.1 | 35.6 | 45.3 |
| 1973 | 63.9 | 72.7 | 58.9 | 40.3 | 60.5 | 54.5 | 19.4 | 37.6 | 46.6 |
| 1974 | 71.3 | 77.4 | 68.0 | 49.2 | 68.0 | 55.2 | 30.1 | 50.2 | 56.4 |
| 1975 | 74.0 | 77.0 | 72.6 | 54.9 | 67.4 | 56.5 | 35.4 | 62.0 | 62.2 |
| 1976 | 73.6 | 78.8 | 70.8 | 58.4 | 72.4 | 63.9 | 38.3 | 64.0 | 66.0 |
| 1977 | 75.9 | 79.4 | 74.0 | 62.5 | 75.3 | 68.3 | 43.6 | 65.9 | 69.4 |
| 1978 | 83.0 | 87.7 | 80.6 | 67.0 | 78.1 | 76.1 | 46.5 | 68.0 | 72.4 |
| 1979 | 92.3 | 99.6 | 88.5 | 75.7 | 82.5 | 96.1 | 58.9 | 76.0 | 80.5 |
| 1980 | 98.3 | 102.9 | 95.9 | 88.0 | 89.7 | 94.7 | 82.8 | 89.0 | 90.1 |
| 1981 | 101.1 | 105.2 | 98.9 | 97.4 | 97.6 | 99.3 | 100.2 | 98.4 | 96.4 |
| 1982 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1983 | 102.0 | 102.4 | 101.8 | 101.1 | 100.3 | 103.2 | 95.9 | 100.3 | 100.8 |
| 1984 | 105.5 | 105.5 | 105.4 | 103.3 | 102.7 | 109.0 | 94.8 | 102.9 | 102.3 |
| 1985 | 100.7 | 95.1 | 103.5 | 103.7 | 102.9 | 108.9 | 91.4 | 103.7 | 101.9 |
| 1986 | 101.2 | 92.9 | 105.4 | 100.0 | 103.2 | 113.0 | 69.8 | 102.6 | 101.9 |
| 1987 | 103.7 | 95.5 | 107.9 | 102.6 | 105.1 | 120.4 | 70.2 | 106.4 | 103.0 |
| 1988 | 110.0 | 104.9 | 112.7 | 106.3 | 109.2 | 131.4 | 66.7 | 116.3 | 109.3 |
| 1989 | 115.4 | 110.9 | 117.8 | 111.6 | 112.3 | 136.3 | 72.9 | 123.0 | 112.6 |
| 1990 | 118.6 | 112.2 | 121.9 | 115.8 | 115.0 | 141.7 | 82.3 | 123.6 | 113.6 |
| 1991 | 116.4 | 105.7 | 121.9 | 116.5 | 116.3 | 138.9 | 81.2 | 125.6 | 115.1 |
| 1992 | 115.9 | 103.6 | 122.1 | 117.4 | 117.8 | 140.4 | 80.4 | 125.9 | 115.1 |
| 1993 | 118.4 | 107.1 | 124.0 | 119.0 | 118.0 | 143.7 | 80.0 | 128.2 | 116.0 |
| 1994 | 119.1 | 106.3 | 125.5 | 120.7 | 118.3 | 148.5 | 77.8 | 132.1 | 117.6 |
| 1995 | 120.5 | 107.4 | 127.0 | 125.5 | 120.8 | 153.7 | 78.0 | 142.5 | 124.3 |
| 1996 | 129.7 | 122.4 | 133.3 | 127.3 | 122.4 | 150.5 | 85.8 | 142.1 | 123.8 |
| 1997 | 127.0 | 112.9 | 134.0 | 127.7 | 122.6 | 154.2 | 86.1 | 143.6 | 123.2 |
| 1998 | 122.7 | 104.6 | 131.6 | 124.8 | 122.9 | 148.0 | 75.3 | 143.9 | 122.6 |
| 1999 | 120.3 | 98.4 | 131.1 | 126.5 | 121.1 | 146.0 | 80.5 | 144.2 | 122.5 |
| 2000 | 122.0 | 99.5 | 133.1 | 134.8 | 121.4 | 151.5 | 103.5 | 151.0 | 125.5 |

See footnote at end of table.

Table 33. **Producer price indexes for major commodity groups, 1947-2000—Continued**

(1982=100)

| Year | Lumber and wood products | Pulp, paper, and allied products | Metals and metal products | Machinery and equipment | Furniture and household durables | Nonmetallic mineral products | Transportation and equipment | Motor vehicles and equipment | Miscellaneous products |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 25.8 | 25.1 | 18.2 | 19.3 | 37.2 | 20.7 | – | 25.5 | 26.6 |
| 1948 | 29.5 | 26.2 | 20.7 | 20.9 | 39.4 | 22.4 | – | 28.2 | 27.7 |
| 1949 | 27.3 | 25.1 | 20.9 | 21.9 | 40.1 | 23.0 | – | 30.1 | 28.2 |
| 1950 | 31.4 | 25.7 | 22.0 | 22.6 | 40.9 | 23.5 | – | 30.0 | 28.6 |
| 1951 | 34.1 | 30.5 | 24.5 | 25.3 | 44.4 | 25.0 | – | 31.6 | 30.3 |
| 1952 | 33.2 | 29.7 | 24.5 | 25.3 | 43.5 | 25.0 | – | 33.4 | 30.2 |
| 1953 | 33.1 | 29.6 | 25.3 | 25.9 | 44.4 | 26.0 | – | 33.3 | 31.0 |
| 1954 | 32.5 | 29.6 | 25.5 | 26.3 | 44.9 | 26.6 | – | 33.4 | 31.3 |
| 1955 | 34.1 | 30.4 | 27.2 | 27.2 | 45.1 | 27.3 | – | 34.3 | 31.3 |
| 1956 | 34.6 | 32.4 | 29.6 | 29.3 | 46.3 | 28.5 | – | 36.3 | 31.7 |
| 1957 | 32.8 | 33.0 | 30.2 | 31.4 | 47.5 | 29.6 | – | 37.9 | 32.6 |
| 1958 | 32.5 | 33.4 | 30.0 | 32.1 | 47.9 | 29.9 | – | 39.0 | 33.3 |
| 1959 | 34.7 | 33.7 | 30.6 | 32.8 | 48.0 | 30.3 | – | 39.9 | 33.4 |
| 1960 | 33.5 | 34.0 | 30.6 | 33.0 | 47.8 | 30.4 | – | 39.3 | 33.6 |
| 1961 | 32.0 | 33.0 | 30.5 | 33.0 | 47.5 | 30.5 | – | 39.2 | 33.7 |
| 1962 | 32.2 | 33.4 | 30.2 | 33.0 | 47.2 | 30.5 | – | 39.2 | 33.9 |
| 1963 | 32.8 | 33.1 | 30.3 | 33.1 | 46.9 | 30.3 | – | 38.9 | 34.2 |
| 1964 | 33.5 | 33.0 | 31.1 | 33.3 | 47.1 | 30.4 | – | 39.1 | 34.4 |
| 1965 | 33.7 | 33.3 | 32.0 | 33.7 | 46.8 | 30.4 | – | 39.2 | 34.7 |
| 1966 | 35.2 | 34.2 | 32.8 | 34.7 | 47.4 | 30.7 | – | 39.2 | 35.3 |
| 1967 | 35.1 | 34.6 | 33.2 | 35.9 | 48.3 | 31.2 | – | 39.8 | 36.2 |
| 1968 | 39.8 | 35.0 | 34.0 | 37.0 | 49.7 | 32.4 | – | 40.9 | 37.0 |
| 1969 | 44.0 | 36.0 | 36.0 | 38.2 | 50.7 | 33.6 | 40.4 | 41.7 | 38.1 |
| 1970 | 39.9 | 37.5 | 38.7 | 40.0 | 51.9 | 35.3 | 41.9 | 43.3 | 39.8 |
| 1971 | 44.7 | 38.1 | 39.4 | 41.4 | 53.1 | 38.2 | 44.2 | 45.7 | 40.8 |
| 1972 | 50.7 | 39.3 | 40.9 | 42.3 | 53.8 | 39.4 | 45.5 | 47.0 | 41.5 |
| 1973 | 62.2 | 42.3 | 44.0 | 43.7 | 55.7 | 40.7 | 46.1 | 47.4 | 43.3 |
| 1974 | 64.5 | 52.5 | 57.0 | 50.0 | 61.8 | 47.8 | 50.3 | 51.4 | 48.1 |
| 1975 | 62.1 | 59.0 | 61.5 | 57.9 | 67.5 | 54.4 | 56.7 | 57.6 | 53.4 |
| 1976 | 72.2 | 62.1 | 65.0 | 61.3 | 70.3 | 58.2 | 60.5 | 61.2 | 55.6 |
| 1977 | 83.0 | 64.6 | 69.3 | 65.2 | 73.2 | 62.6 | 64.6 | 65.2 | 59.4 |
| 1978 | 96.9 | 67.7 | 75.3 | 70.3 | 77.5 | 69.6 | 69.5 | 70.0 | 66.7 |
| 1979 | 105.5 | 75.9 | 86.0 | 76.7 | 82.8 | 77.6 | 75.3 | 75.8 | 75.5 |
| 1980 | 101.5 | 86.3 | 95.0 | 86.0 | 90.7 | 88.4 | 82.9 | 83.1 | 93.6 |
| 1981 | 102.8 | 94.8 | 99.6 | 94.4 | 95.9 | 96.7 | 94.3 | 94.6 | 96.1 |
| 1982 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1983 | 107.9 | 103.3 | 101.8 | 102.7 | 103.4 | 101.6 | 102.8 | 102.2 | 104.8 |
| 1984 | 108.0 | 110.3 | 104.8 | 105.1 | 105.7 | 105.4 | 105.2 | 104.1 | 107.0 |
| 1985 | 106.6 | 113.3 | 104.4 | 107.2 | 107.1 | 108.6 | 107.9 | 106.4 | 109.4 |
| 1986 | 107.2 | 116.1 | 103.2 | 108.8 | 108.2 | 110.0 | 110.5 | 109.1 | 111.6 |
| 1987 | 112.8 | 121.8 | 107.1 | 110.4 | 109.9 | 110.0 | 112.5 | 111.7 | 114.9 |
| 1988 | 118.9 | 130.4 | 118.7 | 113.2 | 113.1 | 111.2 | 114.3 | 113.1 | 120.2 |
| 1989 | 126.7 | 137.8 | 124.1 | 117.4 | 116.9 | 112.6 | 117.7 | 116.2 | 126.5 |
| 1990 | 129.7 | 141.2 | 122.9 | 120.7 | 119.2 | 114.7 | 121.5 | 118.2 | 134.2 |
| 1991 | 132.1 | 142.9 | 120.2 | 123.0 | 121.2 | 117.2 | 126.4 | 122.1 | 140.8 |
| 1992 | 146.6 | 145.2 | 119.2 | 123.4 | 122.2 | 117.3 | 130.4 | 124.9 | 145.3 |
| 1993 | 174.0 | 147.3 | 119.2 | 124.0 | 123.7 | 120.0 | 133.7 | 128.0 | 145.4 |
| 1994 | 180.0 | 152.5 | 124.8 | 125.1 | 126.1 | 124.2 | 137.2 | 131.4 | 141.9 |
| 1995 | 178.1 | 172.2 | 134.5 | 126.6 | 128.2 | 129.0 | 139.7 | 133.0 | 145.4 |
| 1996 | 176.1 | 168.7 | 131.0 | 126.5 | 130.4 | 131.0 | 141.7 | 134.1 | 147.7 |
| 1997 | 183.8 | 167.9 | 131.8 | 125.9 | 130.8 | 133.2 | 141.6 | 132.7 | 150.9 |
| 1998 | 179.1 | 171.7 | 127.8 | 124.9 | 131.3 | 135.4 | 141.2 | 131.4 | 156.0 |
| 1999 | 183.6 | 174.1 | 124.6 | 124.3 | 131.7 | 138.9 | 141.8 | 131.7 | 166.6 |
| 2000 | 178.2 | 183.7 | 128.1 | 124.0 | 132.6 | 142.5 | 143.8 | 132.3 | 170.8 |

[1] Prices for some items in this grouping are lagged and refer to 1 month earlier than the index month.

Table 34. **Producer price indexes by stage of processing, special groups, 1947-2000**

(1982=100)

| Year | Total finished goods | Finished foods | Finished energy | Finished goods excluding foods and energy | Capital equipment | Consumer goods excluding foods and energy | Total Intermediate | Intermediate foods and feeds[1] | Intermediate energy | Intermediate other | Total crude | Crude foods and feeds | Crude energy | Crude other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1947 ........ | 26.4 | 31.9 | – | – | 19.8 | – | 23.3 | – | – | – | 31.7 | 45.1 | – | – |
| 1948 ........ | 28.5 | 34.9 | – | – | 21.6 | – | 25.2 | – | – | – | 34.7 | 48.8 | – | – |
| 1949 ........ | 27.7 | 32.1 | – | – | 22.7 | – | 24.2 | – | – | – | 30.1 | 40.5 | – | – |
| 1950 ........ | 28.2 | 32.7 | – | – | 23.2 | – | 25.3 | – | – | – | 32.7 | 43.4 | – | – |
| 1951 ........ | 30.8 | 36.7 | – | – | 25.5 | – | 28.4 | – | – | – | 37.6 | 50.2 | – | – |
| 1952 ........ | 30.6 | 36.4 | – | – | 25.9 | – | 27.5 | – | – | – | 34.5 | 47.3 | – | – |
| 1953 ........ | 30.3 | 34.5 | – | – | 26.3 | – | 27.7 | – | – | – | 31.9 | 42.3 | – | – |
| 1954 ........ | 30.4 | 34.2 | – | – | 26.7 | – | 27.9 | – | – | – | 31.6 | 42.3 | – | – |
| 1955 ........ | 30.5 | 33.4 | – | – | 27.4 | – | 28.4 | – | – | – | 30.4 | 38.4 | – | – |
| 1956 ........ | 31.3 | 33.3 | – | – | 29.5 | – | 29.6 | – | – | – | 30.6 | 37.6 | – | – |
| 1957 ........ | 32.5 | 34.4 | – | – | 31.3 | – | 30.3 | – | – | – | 31.2 | 39.2 | – | – |
| 1958 ........ | 33.2 | 36.5 | – | – | 32.1 | – | 30.4 | – | – | – | 31.9 | 41.6 | – | – |
| 1959 ........ | 33.1 | 34.8 | – | – | 32.7 | – | 30.8 | – | – | – | 31.1 | 38.8 | – | – |
| 1960 ........ | 33.4 | 35.5 | – | – | 32.8 | – | 30.8 | – | – | – | 30.4 | 38.4 | – | – |
| 1961 ........ | 33.4 | 35.4 | – | – | 32.9 | – | 30.6 | – | – | – | 30.2 | 37.9 | – | – |
| 1962 ........ | 33.5 | 35.7 | – | – | 33.0 | – | 30.6 | – | – | – | 30.5 | 38.6 | – | – |
| 1963 ........ | 33.4 | 35.3 | – | – | 33.1 | – | 30.7 | – | – | – | 29.9 | 37.5 | – | – |
| 1964 ........ | 33.5 | 35.4 | – | – | 33.4 | – | 30.8 | – | – | – | 29.6 | 36.6 | – | – |
| 1965 ........ | 34.1 | 36.8 | – | – | 33.8 | – | 31.2 | – | – | – | 31.1 | 39.2 | – | – |
| 1966 ........ | 35.2 | 39.2 | – | – | 34.6 | – | 32.0 | – | – | – | 33.1 | 42.7 | – | – |
| 1967 ........ | 35.6 | 38.5 | – | – | 35.8 | – | 32.2 | 41.8 | – | – | 31.3 | 40.3 | – | – |
| 1968 ........ | 36.6 | 40.0 | – | – | 37.0 | – | 33.0 | 41.5 | – | – | 31.8 | 40.9 | – | – |
| 1969 ........ | 38.0 | 42.4 | – | – | 38.3 | – | 34.1 | 42.9 | – | – | 33.9 | 44.1 | – | – |
| 1970 ........ | 39.3 | 43.8 | – | – | 40.1 | – | 35.4 | 45.6 | – | – | 35.2 | 45.2 | – | – |
| 1971 ........ | 40.5 | 44.5 | – | – | 41.7 | – | 36.8 | 46.7 | – | – | 36.0 | 46.1 | – | – |
| 1972 ........ | 41.8 | 46.9 | – | – | 42.8 | – | 38.2 | 49.5 | – | – | 39.9 | 51.5 | – | – |
| 1973 ........ | 45.6 | 56.5 | – | 48.1 | 44.2 | 50.4 | 42.4 | 70.3 | – | 44.3 | 54.5 | 72.6 | – | 70.8 |
| 1974 ........ | 52.6 | 64.4 | 26.2 | 53.6 | 50.5 | 55.5 | 52.5 | 83.6 | 33.1 | 54.0 | 61.4 | 76.4 | 27.8 | 83.3 |
| 1975 ........ | 58.2 | 69.8 | 30.7 | 59.7 | 58.2 | 60.6 | 58.0 | 81.6 | 38.7 | 60.2 | 61.6 | 77.4 | 33.3 | 69.3 |
| 1976 ........ | 60.8 | 69.6 | 34.3 | 63.1 | 62.1 | 63.7 | 60.9 | 77.4 | 41.5 | 63.8 | 63.4 | 76.8 | 35.3 | 80.2 |
| 1977 ........ | 64.7 | 73.3 | 39.7 | 66.9 | 66.1 | 67.3 | 64.9 | 79.6 | 46.8 | 67.6 | 65.5 | 77.5 | 40.4 | 79.8 |
| 1978 ........ | 69.8 | 79.9 | 42.3 | 71.9 | 71.3 | 72.2 | 69.5 | 84.8 | 49.1 | 72.5 | 73.4 | 87.3 | 45.2 | 87.8 |
| 1979 ........ | 77.6 | 87.3 | 57.1 | 78.3 | 77.5 | 78.8 | 78.4 | 94.5 | 61.1 | 80.7 | 85.9 | 100.0 | 54.9 | 106.2 |
| 1980 ........ | 88.0 | 92.4 | 85.2 | 87.1 | 85.8 | 87.8 | 90.3 | 105.5 | 84.9 | 90.3 | 95.3 | 104.6 | 73.1 | 113.1 |
| 1981 ........ | 96.1 | 97.8 | 101.5 | 94.6 | 94.6 | 94.6 | 98.6 | 104.6 | 100.5 | 97.7 | 103.0 | 103.9 | 97.7 | 111.7 |
| 1982 ........ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1983 ........ | 101.6 | 101.0 | 95.2 | 103.0 | 102.8 | 103.1 | 100.6 | 103.6 | 95.3 | 101.6 | 101.3 | 101.8 | 98.7 | 105.3 |
| 1984 ........ | 103.7 | 105.4 | 91.2 | 105.5 | 105.2 | 105.7 | 103.1 | 105.7 | 95.5 | 104.7 | 103.5 | 104.7 | 98.0 | 111.7 |
| 1985 ........ | 104.7 | 104.6 | 87.6 | 108.1 | 107.5 | 108.4 | 102.7 | 97.3 | 92.6 | 105.2 | 95.8 | 94.8 | 93.3 | 104.9 |
| 1986 ........ | 103.2 | 107.3 | 63.0 | 110.6 | 109.7 | 111.1 | 99.1 | 96.2 | 72.6 | 104.9 | 87.7 | 93.2 | 71.8 | 103.1 |
| 1987 ........ | 105.4 | 109.5 | 61.8 | 113.3 | 111.7 | 114.2 | 101.5 | 99.2 | 73.0 | 107.8 | 93.7 | 96.2 | 75.0 | 115.7 |
| 1988 ........ | 108.0 | 112.6 | 59.8 | 117.0 | 114.3 | 118.5 | 107.1 | 109.5 | 70.9 | 115.2 | 96.0 | 106.1 | 67.7 | 133.0 |
| 1989 ........ | 113.6 | 118.7 | 65.7 | 122.1 | 118.8 | 124.0 | 112.0 | 113.8 | 76.1 | 120.2 | 103.1 | 111.2 | 75.9 | 137.9 |
| 1990 ........ | 119.2 | 124.4 | 75.0 | 126.6 | 122.9 | 128.8 | 114.5 | 113.3 | 85.5 | 120.9 | 108.9 | 113.1 | 85.9 | 136.3 |
| 1991 ........ | 121.7 | 124.1 | 78.1 | 131.1 | 126.7 | 133.7 | 114.4 | 111.1 | 85.1 | 121.4 | 101.2 | 105.5 | 80.4 | 128.2 |
| 1992 ........ | 123.2 | 123.3 | 77.8 | 134.2 | 129.1 | 137.3 | 114.7 | 110.7 | 84.3 | 122.0 | 100.4 | 105.1 | 78.8 | 128.4 |
| 1993 ........ | 124.7 | 125.7 | 78.0 | 135.8 | 131.4 | 138.5 | 116.2 | 112.7 | 84.6 | 123.8 | 102.4 | 108.4 | 76.7 | 140.2 |
| 1994 ........ | 125.5 | 126.8 | 77.0 | 137.1 | 134.1 | 139.0 | 118.5 | 114.8 | 83.0 | 127.1 | 101.8 | 106.5 | 72.1 | 156.2 |
| 1995 ........ | 127.9 | 129.0 | 78.1 | 140.0 | 136.7 | 141.9 | 124.9 | 114.8 | 84.1 | 135.2 | 102.7 | 105.8 | 69.4 | 173.6 |
| 1996 ........ | 131.3 | 133.6 | 83.2 | 142.0 | 138.3 | 144.3 | 125.7 | 128.1 | 89.8 | 134.0 | 113.8 | 121.5 | 85.0 | 155.8 |
| 1997 ........ | 131.8 | 134.5 | 83.4 | 142.4 | 138.2 | 145.1 | 125.6 | 125.4 | 89.0 | 134.2 | 111.1 | 112.2 | 87.3 | 156.5 |
| 1998 ........ | 130.7 | 134.3 | 75.1 | 143.7 | 137.6 | 147.7 | 123.0 | 116.2 | 80.8 | 133.5 | 96.8 | 103.9 | 68.6 | 142.1 |
| 1999 ........ | 133.0 | 135.1 | 78.8 | 146.1 | 137.6 | 151.7 | 123.2 | 111.1 | 84.3 | 133.1 | 98.2 | 98.7 | 78.5 | 135.2 |
| 2000 ........ | 138.0 | 137.2 | 94.1 | 148.0 | 138.8 | 154.0 | 129.2 | 111.7 | 101.7 | 136.6 | 120.6 | 100.2 | 122.1 | 145.2 |

[1] Intermediate materials for food manufacturing and feeds.

Dash indicates data not available.

Table 35. **Consumer Price Index for All Urban Consumers (CPI-U), 1960-2000**

| Year | Annual average | | | | December | | | |
|---|---|---|---|---|---|---|---|---|
| | All items | Food | Energy | All items less food and energy | All items | Food | Energy | All items less food and energy |
| 1960 | 29.6 | 30.0 | 22.4 | 30.6 | 29.8 | 30.4 | 22.7 | 30.8 |
| 1961 | 29.9 | 30.4 | 22.5 | 31.0 | 30.0 | 30.2 | 22.4 | 31.2 |
| 1962 | 30.2 | 30.6 | 22.6 | 31.4 | 30.4 | 30.6 | 22.9 | 31.6 |
| 1963 | 30.6 | 31.1 | 22.6 | 31.8 | 30.9 | 31.2 | 22.7 | 32.1 |
| 1964 | 31.0 | 31.5 | 22.5 | 32.3 | 31.2 | 31.6 | 22.7 | 32,5 |
| 1965 | 31.5 | 32,2 | 22.9 | 32.7 | 31.8 | 32.7 | 23.1 | 33.0 |
| 1966 | 32.4 | 33.8 | 23.3 | 33.5 | 32.9 | 34.0 | 23.5 | 34.1 |
| 1967 | 33.4 | 34.1 | 23.8 | 34.7 | 33.9 | 34.4 | 23.9 | 35.4 |
| 1968 | 34.8 | 35.3 | 24.2 | 36.3 | 35.5 | 35.9 | 24.3 | 37.2 |
| 1969 | 36.7 | 37.1 | 24.8 | 38.4 | 37.7 | 38.4 | 25.0 | 39.5 |
| 1970 | 38.8 | 39.2 | 25.5 | 40.8 | 39.8 | 39.3 | 26.2 | 42.1 |
| 1971 | 40.5 | 40.4 | 26.5 | 42.7 | 41.1 | 41.0 | 27.0 | 43.4 |
| 1972 | 41.8 | 42.1 | 27.2 | 44.0 | 42.5 | 42.9 | 27.7 | 44.7 |
| 1973 | 44.4 | 48.2 | 29.4 | 45.6 | 46.2 | 51.6 | 32.4 | 46.8 |
| 1974 | 49.3 | 55.1 | 38.1 | 49.4 | 51.9 | 57.8 | 39.4 | 52.0 |
| 1975 | 53.8 | 59.8 | 42.1 | 53.9 | 55.5 | 61.6 | 43.9 | 55.5 |
| 1976 | 56.9 | 61.6 | 45.1 | 57.4 | 58.2 | 61.9 | 47.0 | 58.9 |
| 1977 | 60.6 | 65.5 | 49.4 | 61.0 | 62.1 | 66.9 | 50.4 | 62.7 |
| 1978 | 65.2 | 72.0 | 52.5 | 65.5 | 67.7 | 74.8 | 54.4 | 68.0 |
| 1979 | 72.6 | 79.9 | 65.7 | 71.9 | 76.7 | 82.4 | 74.8 | 75.7 |
| 1980 | 82.4 | 86.8 | 86.0 | 80.8 | 86.3 | 90.8 | 88.3 | 84.9 |
| 1981 | 90.9 | 93.6 | 97.7 | 89.2 | 94.0 | 94.7 | 98.8 | 93.0 |
| 1982 | 96.5 | 97.4 | 99.2 | 95.8 | 97.6 | 97.6 | 100.1 | 97.2 |
| 1983 | 99.6 | 99.4 | 99.9 | 99.6 | 101.3 | 100.2 | 99.6 | 101.9 |
| 1984 | 103.9 | 103.2 | 100.9 | 104.6 | 105.3 | 104.0 | 99.8 | 106.7 |
| 1985 | 107.6 | 105.6 | 101.6 | 109.1 | 109.3 | 106.7 | 101.6 | 111.3 |
| 1986 | 109.6 | 109.0 | 88.2 | 113.5 | 110.5 | 110.8 | 81.6 | 115.5 |
| 1987 | 113.6 | 113.5 | 88.6 | 118.2 | 115.4 | 114.7 | 88.3 | 120.4 |
| 1988 | 118.3 | 118.2 | 89.3 | 123.4 | 120.5 | 120.7 | 88.7 | 126.0 |
| 1989 | 124.0 | 125.1 | 94.3 | 129.0 | 126.1 | 127.4 | 93.2 | 131.5 |
| 1990 | 130.7 | 132.4 | 102.1 | 135.5 | 133.8 | 134.2 | 110.1 | 138.3 |
| 1991 | 136.2 | 136.3 | 102.5 | 142.1 | 137.9 | 136.7 | 101.9 | 144.4 |
| 1992 | 140.3 | 137.9 | 103.0 | 147.3 | 141.9 | 138.7 | 103.9 | 149.2 |
| 1993 | 144.5 | 140.9 | 104.2 | 152.2 | 145.8 | 142.7 | 102.4 | 153.9 |
| 1994 | 148.2 | 144.3 | 104.6 | 156.5 | 149.7 | 146.8 | 104.7 | 157.9 |
| 1995 | 152.4 | 148.4 | 105.2 | 161.2 | 153.5 | 149.9 | 103.3 | 162.7 |
| 1996 | 156.9 | 153.3 | 110.1 | 165.6 | 158.6 | 156.3 | 112.2 | 167.0 |
| 1997 | 160.5 | 157.3 | 111.5 | 169.5 | 161.3 | 158.7 | 108.4 | 170.7 |
| 1998 | 163.0 | 160.7 | 102.9 | 173.4 | 163.9 | 162.3 | 98.9 | 174.8 |
| 1999 | 166.6 | 164.1 | 106.6 | 177.0 | 168.3 | 165.4 | 112.2 | 178.2 |
| 2000 | 172.2 | 167.8 | 124.6 | 181.3 | 174.0 | 170.0 | 128.1 | 182.8 |

Table 35. **Consumer Price Index for All Urban Consumers (CPI-U), 1960-2000—Continued**

| Year | Annual average percent change from previous year | | | | Percent change to December from prior December | | | |
|---|---|---|---|---|---|---|---|---|
| | All items | Food | Energy | All items less food and energy | All items | Food | Energy | All items less food and energy |
| 1960 | 1.7 | 1.0 | 2.3 | 1.3 | 1.4 | 3.1 | 1.3 | 1.0 |
| 1961 | 1.0 | 1.3 | .4 | 1.3 | .7 | -.7 | -1.3 | 1.3 |
| 1962 | 1.0 | .7 | .4 | 1.3 | 1.3 | 1.3 | 2.2 | 1.3 |
| 1963 | 1.3 | 1.6 | .0 | 1.3 | 1.6 | 2.0 | -.9 | 1.6 |
| 1964 | 1.3 | 1.3 | -.4 | 1.6 | 1.0 | 1.3 | 0 | 1.2 |
| 1965 | 1.6 | 2.2 | 1.8 | 1.2 | 1.9 | 3.5 | 1.8 | 1.5 |
| 1966 | 2.9 | 5.0 | 1.7 | 2.4 | 3.5 | 4.0 | 1.7 | 3.3 |
| 1967 | 3.1 | .9 | 2.1 | 3.6 | 3.0 | 1.2 | 1.7 | 3.8 |
| 1968 | 4.2 | 3.5 | 1.7 | 4.6 | 4.7 | 4.4 | 1.7 | 5.1 |
| 1969 | 5.5 | 5.1 | 2.5 | 5.8 | 6.2 | 7.0 | 2.9 | 6.2 |
| 1970 | 5.7 | 5.7 | 2.8 | 6.3 | 5.6 | 2.3 | 4.8 | 6.6 |
| 1971 | 4.4 | 3.1 | 3.9 | 4.7 | 3.3 | 4.3 | 3.1 | 3.1 |
| 1972 | 3.2 | 4.2 | 2.6 | 3.0 | 3.4 | 4.6 | 2.6 | 3.0 |
| 1973 | 6.2 | 14.5 | 8.1 | 3.6 | 8.7 | 20.3 | 17.0 | 4.7 |
| 1974 | 11.0 | 14.3 | 29.6 | 8.3 | 12.3 | 12.0 | 21.6 | 11.1 |
| 1975 | 9.1 | 8.5 | 10.5 | 9.1 | 6.9 | 6.6 | 11.4 | 6.7 |
| 1976 | 5.8 | 3.0 | 7.1 | 6.5 | 4.9 | .5 | 7.1 | 6.1 |
| 1977 | 6.5 | 6.3 | 9.5 | 6.3 | 6.7 | 8.1 | 7.2 | 6.5 |
| 1978 | 7.6 | 9.9 | 6.3 | 7.4 | 9.0 | 11.8 | 7.9 | 8.5 |
| 1979 | 11.3 | 11.0 | 25.1 | 9.8 | 13.3 | 10.2 | 37.5 | 11.3 |
| 1980 | 13.5 | 8.6 | 30.9 | 12.4 | 12.5 | 10.2 | 18.0 | 12.2 |
| 1981 | 10.3 | 7.8 | 13.6 | 10.4 | 8.9 | 4.3 | 11.9 | 9.5 |
| 1982 | 6.2 | 4.1 | 1.5 | 7.4 | 3.8 | 3.1 | 1.3 | 4.5 |
| 1983 | 3.2 | 2.1 | .7 | 4.0 | 3.8 | 2.7 | -.5 | 4.8 |
| 1984 | 4.3 | 3.8 | 1.0 | 5.0 | 3.9 | 3.8 | .2 | 4.7 |
| 1985 | 3.6 | 2.3 | .7 | 4.3 | 3.8 | 2.6 | 1.8 | 4.3 |
| 1986 | 1.9 | 3.2 | -13.2 | 4.0 | 1.1 | 3.8 | -19.7 | 3.8 |
| 1987 | 3.6 | 4.1 | .5 | 4.1 | 4.4 | 3.5 | 8.2 | 4.2 |
| 1988 | 4.1 | 4.1 | .8 | 4.4 | 4.4 | 5.2 | .5 | 4.7 |
| 1989 | 4.8 | 5.8 | 5.6 | 4.5 | 4.6 | 5.6 | 5.1 | 4.4 |
| 1990 | 5.4 | 5.8 | 8.3 | 5.0 | 6.1 | 5.3 | 18.1 | 5.2 |
| 1991 | 4.2 | 2.9 | .4 | 4.9 | 3.1 | 1.9 | -7.4 | 4.4 |
| 1992 | 3.0 | 1.2 | .5 | 3.7 | 2.9 | 1.5 | 2.0 | 3.3 |
| 1993 | 3.0 | 2.2 | 1.2 | 3.3 | 2.7 | 2.9 | -1.4 | 3.2 |
| 1994 | 2.6 | 2.4 | .4 | 2.8 | 2.7 | 2.9 | 2.2 | 2.6 |
| 1995 | 2.8 | 2.8 | .6 | 3.0 | 2.5 | 2.1 | -1.3 | 3.0 |
| 1996 | 3.0 | 3.3 | 4.7 | 2.7 | 3.3 | 4.3 | 8.6 | 2.6 |
| 1997 | 2.3 | 2.6 | 1.3 | 2.4 | 1.7 | 1.5 | -3.4 | 2.2 |
| 1998 | 1.6 | 2.2 | -7.7 | 2.3 | 1.6 | 2.3 | -8.8 | 2.4 |
| 1999 | 2.2 | 2.1 | 3.6 | 2.1 | 2.7 | 1.9 | 13.4 | 1.9 |
| 2000 | 3.4 | 2.3 | 16.9 | 2.4 | 3.4 | 2.8 | 14.2 | 2.6 |

Table 36. **Average annual expenditures and percent distribution of all consumer units, selected periods, 1935-36 to 1998-99**

| Item | Averages | | | | Percent of current consumption | | | |
|---|---|---|---|---|---|---|---|---|
| | 1935-36 | 1960-61 | 1972-73 | 1998-99 | 1935-36 | 1960-61 | 1972-73 | 1998-99 |
| Characteristics | | | | | | | | |
| Number of consumer units (in thousands) | 39,458 | 55,306 | 71,220 | 107,824 | | | | |
| Income before taxes | $1,502 | $6,253 | $11,726 | $42,770 | | | | |
| Income after taxes | - | 5,564 | 10,174 | 39,489 | | | | |
| Average consumer unit size | 3.2 | 3.2 | 2.9 | 2.5 | | | | |
| Percent homeowner | - | 61 | 58 | 65 | | | | |
| Expenditures | | | | | | | | |
| Current Consumption | $1,273 | $5,056 | $7,920 | $30,778 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 428 | 1,236 | 1,679 | 4,861 | 33.6 | 24.4 | 21.2 | 15.8 |
| Food at home | - | 990 | 1,303 | 2,848 | - | 19.6 | 16.5 | 9.3 |
| Food away from home | - | 246 | 376 | 2,013 | - | 4.9 | 4.7 | 6.5 |
| Alcoholic beverages | - | 78 | 82 | 313 | - | 1.5 | 1.0 | 1.0 |
| Shelter | 241 | 664 | 1,395 | 6,796 | 18.9 | 13.1 | 17.6 | 22.1 |
| Household operations and utilities | 134 | 538 | 715 | 2,822 | 10.5 | 10.6 | 9.0 | 9.2 |
| Housefurnishings | 36 | 266 | 378 | 1,435 | 2.8 | 5.3 | 4.8 | 4.7 |
| Apparel and services | 133 | 519 | 647 | 1,649 | 10.4 | 10.3 | 8.2 | 5.4 |
| Vehicle purchases [1] | 96 | 299 | 714 | 3,136 | 7.5 | 5.9 | 9.0 | 10.2 |
| Vehicle operations | - | 393 | 935 | 3,246 | - | 7.8 | 11.8 | 10.5 |
| Public transportation | 22 | 77 | 96 | 368 | 1.7 | 1.5 | 1.2 | 1.2 |
| Health care | 56 | 340 | 429 | 1,919 | 4.4 | 6.7 | 5.4 | 6.2 |
| Insurance | - | 90 | 152 | 918 | - | 1.8 | 1.9 | 3.0 |
| Services | - | 168 | 216 | 538 | - | 3.3 | 2.7 | 1.7 |
| Drugs | - | 69 | 47 | 358 | - | 1.4 | .6 | 1.2 |
| Supplies | - | 13 | 14 | 105 | - | .3 | .2 | .3 |
| Entertainment | 42 | 200 | 373 | 1,710 | 3.3 | 4.0 | 4.7 | 5.6 |
| Personal care | 26 | 145 | 101 | 405 | 2.0 | 2.9 | 1.3 | 1.3 |
| Tobacco | 24 | 91 | 128 | 287 | 1.9 | 1.8 | 1.6 | .9 |
| Education | 13 | 54 | 109 | 485 | 1.0 | 1.1 | 1.4 | 1.6 |
| Reading | 14 | 45 | 48 | 160 | 1.1 | .9 | .6 | .5 |
| Other items | 8 | 111 | 91 | 1,187 | .6 | 2.2 | 1.1 | 3.9 |

[1] Vehicle purchases also includes vehicle operations for 1935-36 data.

Dash indicates data not available.

Table 37. **Shares of average annual expenditures and characteristics of all consumer units classified by quintiles of income before taxes, Consumer Expenditure Survey, 1989 and 1999**

| Item | All consumer units | Complete reporting of income | | | | | | Incomplete reporting of income |
|---|---|---|---|---|---|---|---|---|
| | | Total complete reporting | Lowest 20 percent | Second 20 percent | Third 20 percent | Fourth 20 percent | Highest 20 percent | |
| 1989 | | | | | | | | |
| Number of consumer units (in thousands) | 95,818 | 82,960 | 16,558 | 16,584 | 16,592 | 16,607 | 16,620 | 12,857 |
| Consumer unit characteristics: | | | | | | | | |
| Income before taxes [1] | $31,308 | $31,308 | $5,720 | $13,894 | $23,856 | $37,524 | $75,406 | (1) |
| Age of reference person | 47.2 | 47.1 | 51.1 | 50.5 | 45.5 | 43.0 | 45.4 | 47.7 |
| Average number in consumer unit: | | | | | | | | |
| Persons | 2.6 | 2.5 | 1.8 | 2.2 | 2.6 | 2.9 | 3.1 | 2.7 |
| Children under 18 | .7 | .7 | .5 | .5 | .7 | .9 | .8 | .7 |
| Persons 65 and over | .3 | .3 | .5 | .5 | .3 | .2 | .1 | .3 |
| Earners | 1.4 | 1.4 | .7 | 1.0 | 1.4 | 1.8 | 2.1 | 1.4 |
| Vehicles | 2.0 | 2.0 | .9 | 1.5 | 2.0 | 2.6 | 3.1 | 2.0 |
| Percent homeowner | 63 | 62 | 41 | 50 | 60 | 71 | 88 | 66 |
| Average annual expenditures | $27,810 | $28,323 | $12,119 | $17,616 | $24,476 | $34,231 | $53,093 | $24,862 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 14.9 | 14.8 | 18.2 | 17.6 | 15.9 | 14.5 | 12.8 | 16.1 |
| Food at home | 8.6 | 8.5 | 12.5 | 11.5 | 9.6 | 8.1 | 6.3 | 9.4 |
| Cereals and bakery products | 1.3 | 1.3 | 2.0 | 1.7 | 1.4 | 1.2 | .9 | 1.4 |
| Meats, poultry, fish, and eggs | 2.2 | 2.2 | 3.2 | 3.1 | 2.5 | 2.0 | 1.6 | 2.4 |
| Dairy products | 1.1 | 1.1 | 1.7 | 1.5 | 1.2 | 1.0 | .8 | 1.2 |
| Fruits and vegetables | 1.5 | 1.4 | 2.2 | 2.0 | 1.6 | 1.4 | 1.0 | 1.7 |
| Other food at home | 2.5 | 2.5 | 3.4 | 3.2 | 2.9 | 2.5 | 2.0 | 2.7 |
| Food away from home | 6.3 | 6.3 | 5.7 | 6.1 | 6.3 | 6.3 | 6.5 | 6.7 |
| Alcoholic beverages | 1.0 | 1.1 | 1.1 | 1.1 | 1.3 | 1.1 | .9 | .9 |
| Housing | 31.0 | 30.4 | 35.2 | 32.7 | 30.3 | 28.7 | 29.6 | 35.1 |
| Shelter | 17.4 | 17.0 | 19.6 | 17.5 | 16.5 | 16.0 | 17.2 | 19.7 |
| Owned dwellings | 10.2 | 10.0 | 6.7 | 6.1 | 7.9 | 9.7 | 13.3 | 11.8 |
| Rented dwellings | 5.4 | 5.4 | 11.8 | 10.4 | 7.4 | 4.8 | 1.7 | 5.4 |
| Other lodging | 1.7 | 1.6 | 1.1 | 1.0 | 1.2 | 1.5 | 2.2 | 2.4 |
| Utilities, fuels, and public services | 6.6 | 6.4 | 9.7 | 8.5 | 7.2 | 5.9 | 4.9 | 8.0 |
| Household operations | 1.7 | 1.6 | 1.2 | 1.3 | 1.5 | 1.5 | 1.9 | 2.0 |
| Housekeeping supplies | 1.4 | 1.4 | 1.5 | 2.0 | 1.6 | 1.3 | 1.3 | 1.3 |
| Household furnishings and equipment | 3.9 | 3.9 | 3.1 | 3.4 | 3.6 | 3.9 | 4.3 | 4.2 |
| Apparel and services | 5.7 | 5.7 | 5.2 | 5.2 | 5.7 | 5.9 | 5.8 | 6.0 |
| Transportation | 18.7 | 18.6 | 16.4 | 18.2 | 18.6 | 21.1 | 17.7 | 18.7 |
| Vehicle purchases | 8.2 | 8.3 | 6.9 | 7.8 | 7.7 | 10.2 | 7.8 | 7.7 |
| Gasoline and motor oil | 3.5 | 3.5 | 3.8 | 4.0 | 4.1 | 3.6 | 2.9 | 3.9 |
| Other vehicle expenses | 5.9 | 5.9 | 4.6 | 5.6 | 6.1 | 6.4 | 5.8 | 5.7 |
| Public transportation | 1.0 | 1.0 | 1.1 | .8 | .8 | .9 | 1.2 | 1.3 |
| Health care | 5.1 | 5.0 | 7.1 | 7.6 | 5.6 | 4.2 | 3.8 | 5.6 |
| Entertainment | 5.1 | 5.1 | 4.2 | 3.7 | 4.6 | 5.1 | 5.9 | 5.6 |
| Personal care products and services | 1.3 | 1.3 | 1.4 | 1.7 | 1.4 | 1.3 | 1.2 | 1.3 |
| Reading | .6 | .6 | .5 | .6 | .6 | .5 | .6 | .6 |
| Education | 1.3 | 1.2 | 2.2 | .8 | .8 | .9 | 1.5 | 2.1 |
| Tobacco products and smoking supplies | .9 | .9 | 1.5 | 1.3 | 1.3 | .9 | .5 | .9 |
| Miscellaneous | 2.3 | 2.4 | 2.3 | 2.2 | 2.7 | 2.2 | 2.4 | 1.8 |
| Cash contributions | 3.2 | 3.3 | 1.9 | 2.4 | 3.0 | 3.0 | 4.2 | 2.8 |
| Personal insurance and pensions | 8.9 | 9.7 | 2.7 | 5.0 | 8.1 | 10.5 | 13.2 | 2.5 |
| Life and other personal insurance | 1.2 | 1.2 | .9 | 1.1 | 1.1 | 1.3 | 1.4 | 1.3 |
| Pensions and Social Security | 7.6 | 8.5 | 1.7 | 3.9 | 7.0 | 9.2 | 11.8 | 1.1 |

See footnotes at end of table.

Table 37. **Shares of average annual expenditures and characteristics of all consumer units classified by quintiles of income before taxes, Consumer Expenditure Survey, 1989 and 1999—Continued**

| Item | All consumer units | Complete reporting of income | | | | | | Incomplete reporting of income |
|---|---|---|---|---|---|---|---|---|
| | | Total complete reporting | Lowest 20 percent | Second 20 percent | Third 20 percent | Fourth 20 percent | Highest 20 percent | |
| 1999 | | | | | | | | |
| Number of consumer units (in thousands) | 108,465 | 81,692 | 16,307 | 16,351 | 16,332 | 16,341 | 16,361 | 26,773 |
| Consumer unit characteristics: | | | | | | | | |
| Income before taxes [1] | $43,951 | $43,951 | $7,264 | $18,033 | $31,876 | $52,331 | $110,105 | (1) |
| Age of reference person | 47.9 | 47.9 | 51.6 | 51.6 | 46.5 | 44.1 | 45.9 | 47.8 |
| Average number in consumer unit: | | | | | | | | |
| Persons | 2.5 | 2.5 | 1.8 | 2.2 | 2.5 | 2.8 | 3.1 | 2.6 |
| Children under 18 | .7 | .7 | .4 | .6 | .7 | .8 | .8 | .7 |
| Persons 65 and over | .3 | .3 | .4 | .5 | .3 | .2 | .1 | .3 |
| Earners | 1.3 | 1.4 | .7 | .9 | 1.3 | 1.8 | 2.0 | 1.3 |
| Vehicles | 1.9 | 2.0 | 1.0 | 1.6 | 2.0 | 2.4 | 2.8 | 1.8 |
| Percent homeowner | 65 | 64 | 43 | 55 | 63 | 73 | 88 | 67 |
| Average annual expenditures | $36,995 | $39,143 | $16,750 | $24,840 | $33,029 | $45,998 | $75,015 | $30,787 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 13.6 | 13.3 | 16.2 | 15.2 | 14.5 | 13.5 | 11.4 | 14.9 |
| Food at home | 7.9 | 7.7 | 10.9 | 10.0 | 8.6 | 7.9 | 5.7 | 8.7 |
| Cereals and bakery products | 1.2 | 1.2 | 1.7 | 1.5 | 1.3 | 1.2 | .9 | 1.4 |
| Meats, poultry, fish, and eggs | 2.0 | 1.9 | 3.0 | 2.6 | 2.2 | 2.0 | 1.3 | 2.4 |
| Dairy products | .9 | .9 | 1.2 | 1.1 | 1.0 | .9 | .7 | .9 |
| Fruits and vegetables | 1.4 | 1.3 | 1.9 | 1.8 | 1.5 | 1.3 | 1.0 | 1.5 |
| Other food at home | 2.4 | 2.4 | 3.1 | 3.0 | 2.7 | 2.5 | 1.8 | 2.6 |
| Food away from home | 5.7 | 5.6 | 5.3 | 5.2 | 6.0 | 5.6 | 5.7 | 6.2 |
| Alcoholic beverages | .9 | .9 | 1.0 | .9 | .8 | .8 | .9 | .8 |
| Housing | 32.6 | 31.5 | 37.0 | 34.0 | 31.6 | 30.2 | 30.1 | 36.8 |
| Shelter | 19.0 | 18.0 | 21.4 | 19.0 | 18.1 | 17.2 | 17.5 | 22.3 |
| Owned dwellings | 12.2 | 11.5 | 8.1 | 8.3 | 10.1 | 11.5 | 14.0 | 14.9 |
| Rented dwellings | 5.5 | 5.3 | 12.4 | 9.7 | 7.2 | 4.8 | 1.8 | 6.0 |
| Other lodging | 1.3 | 1.2 | .9 | .9 | .8 | .9 | 1.7 | 1.4 |
| Utilities, fuels, and public services | 6.4 | 6.1 | 9.2 | 7.9 | 6.9 | 5.8 | 4.5 | 7.8 |
| Household operations | 1.8 | 1.8 | 1.5 | 1.6 | 1.2 | 1.6 | 2.4 | 1.7 |
| Housekeeping supplies | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.2 | 1.2 |
| Household furnishings and equipment | 4.1 | 4.1 | 3.4 | 3.9 | 3.9 | 4.1 | 4.5 | 3.8 |
| Apparel and services | 4.7 | 4.8 | 4.7 | 5.4 | 5.3 | 4.3 | 4.6 | 4.6 |
| Transportation | 19.0 | 18.4 | 16.7 | 19.1 | 19.3 | 19.6 | 17.6 | 20.7 |
| Vehicle purchases (net outlay) | 8.9 | 8.7 | 7.3 | 9.2 | 8.8 | 9.4 | 8.4 | 9.7 |
| Gasoline and motor oil | 2.9 | 2.7 | 3.0 | 3.1 | 3.3 | 2.9 | 2.2 | 3.3 |
| Other vehicle expenses | 6.1 | 6.0 | 5.4 | 5.9 | 6.4 | 6.3 | 5.7 | 6.5 |
| Public transportation | 1.1 | 1.0 | 1.0 | 1.0 | .9 | .9 | 1.2 | 1.2 |
| Health care | 5.3 | 5.2 | 7.5 | 7.7 | 5.9 | 4.8 | 3.8 | 5.6 |
| Entertainment | 5.1 | 5.1 | 4.8 | 4.4 | 4.7 | 5.2 | 5.4 | 5.3 |
| Personal care products and services | 1.1 | 1.1 | 1.3 | 1.2 | 1.3 | 1.1 | 1.0 | 1.0 |
| Reading | .4 | .4 | .5 | .5 | .4 | .4 | .4 | .4 |
| Education | 1.7 | 1.5 | 2.7 | 1.1 | 1.0 | 1.1 | 1.8 | 2.5 |
| Tobacco products and smoking supplies | .8 | .8 | 1.4 | 1.2 | 1.0 | .8 | .4 | .8 |
| Miscellaneous | 2.3 | 2.4 | 2.1 | 2.3 | 2.4 | 2.3 | 2.5 | 2.2 |
| Cash contributions | 3.2 | 3.4 | 1.8 | 2.6 | 3.2 | 3.4 | 4.2 | 2.2 |
| Personal insurance and pensions | 9.3 | 11.1 | 2.4 | 4.5 | 8.4 | 12.3 | 15.7 | 2.1 |
| Life and other personal insurance | 1.1 | 1.0 | .8 | .8 | .9 | 1.0 | 1.2 | 1.1 |
| Pensions and Social Security | 8.2 | 10.1 | 1.6 | 3.7 | 7.5 | 11.3 | 14.5 | .9 |

[1] Components of income and taxes are derived from "complete income reporters" only; see glossary.
n.a. Not applicable.

Table 38. **Shares of average annual expenditures and characteristics of all consumer units classified by age of the reference person, Consumer Expenditure Survey, 1989 and 1999**

| Item | All consumer units | Under 25 | 25-34 | 35-44 | 45-54 | 55-64 | 65 and over | 65-74 | 75 and over |
|---|---|---|---|---|---|---|---|---|---|
| 1989 | | | | | | | | | |
| Number of consumer units (in thousands) | 95,818 | 7,633 | 20,855 | 20,436 | 14,566 | 12,005 | 20,323 | 11,848 | 8,474 |
| Consumer unit characteristics: | | | | | | | | | |
| Income before taxes [1] | $31,308 | $14,863 | $30,655 | $40,915 | $41,968 | $34,777 | $19,690 | $22,051 | $16,285 |
| Age of reference person | 47.2 | 21.5 | 29.7 | 39.4 | 49.2 | 59.6 | 73.9 | 69.2 | 80.5 |
| Average number in consumer unit: | | | | | | | | | |
| Persons | 2.6 | 1.8 | 2.7 | 3.3 | 3.0 | 2.3 | 1.8 | 1.9 | 1.6 |
| Children under 18 | .7 | .4 | 1.1 | 1.4 | .7 | .2 | .1 | .1 | (2) |
| Persons 65 and over | .3 | (2) | (2) | (2) | (2) | .1 | 1.4 | 1.4 | 1.4 |
| Earners | 1.4 | 1.3 | 1.5 | 1.8 | 2.0 | 1.5 | .5 | .6 | .2 |
| Vehicles | 2.0 | 1.2 | 1.9 | 2.4 | 2.7 | 2.3 | 1.4 | 1.7 | 1.1 |
| Percent homeowner | 63 | 8 | 44 | 69 | 74 | 82 | 76 | 78 | 74 |
| Average annual expenditures | $27,810 | $16,577 | $26,683 | $35,589 | $36,073 | $28,617 | $18,967 | $21,152 | $15,919 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 14.9 | 15.1 | 14.7 | 14.7 | 14.9 | 15.5 | 15.4 | 15.2 | 15.7 |
| Food at home | 8.6 | 7.8 | 8.1 | 8.4 | 8.3 | 9.1 | 10.1 | 9.7 | 10.8 |
| Cereals and bakery products | 1.3 | 1.2 | 1.2 | 1.3 | 1.2 | 1.3 | 1.6 | 1.4 | 1.9 |
| Meats, poultry, fish, and eggs | 2.2 | 1.7 | 2.0 | 2.1 | 2.3 | 2.5 | 2.5 | 2.5 | 2.6 |
| Dairy products | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | 1.2 | 1.2 | 1.4 |
| Fruits and vegetables | 1.5 | 1.2 | 1.3 | 1.4 | 1.4 | 1.6 | 2.0 | 1.9 | 2.2 |
| Other food at home | 2.5 | 2.6 | 2.5 | 2.5 | 2.4 | 2.6 | 2.6 | 2.6 | 2.7 |
| Food away from home | 6.3 | 7.4 | 6.6 | 6.3 | 6.6 | 6.3 | 5.3 | 5.5 | 5.0 |
| Alcoholic beverages | 1.0 | 1.9 | 1.4 | .9 | .8 | 1.0 | .7 | .8 | .6 |
| Housing | 31.0 | 28.9 | 33.4 | 30.7 | 29.6 | 28.5 | 32.5 | 32.0 | 33.4 |
| Shelter | 17.4 | 18.4 | 19.6 | 17.9 | 16.7 | 15.1 | 15.8 | 15.5 | 16.2 |
| Owned dwellings | 10.2 | 1.7 | 9.7 | 12.3 | 10.9 | 10.2 | 9.1 | 9.5 | 8.4 |
| Rented dwellings | 5.4 | 15.9 | 8.8 | 4.1 | 3.4 | 2.6 | 4.8 | 4.1 | 6.1 |
| Other lodging | 1.7 | .7 | 1.1 | 1.6 | 2.4 | 2.3 | 1.8 | 1.9 | 1.7 |
| Utilities, fuels, and public services | 6.6 | 5.2 | 6.1 | 6.0 | 6.3 | 7.1 | 8.9 | 8.6 | 9.6 |
| Household operations | 1.7 | .7 | 2.3 | 1.7 | 1.1 | 1.2 | 2.2 | 1.7 | 3.0 |
| Housekeeping supplies | 1.4 | 1.0 | 1.3 | 1.4 | 1.3 | 1.4 | 1.9 | 1.8 | 2.0 |
| Household furnishings and equipment | 3.9 | 3.5 | 4.2 | 3.8 | 4.2 | 3.7 | 3.8 | 4.3 | 2.7 |
| Apparel and services | 5.7 | 6.9 | 5.8 | 6.0 | 5.6 | 5.5 | 4.8 | 5.4 | 3.6 |
| Transportation | 18.7 | 24.0 | 19.0 | 18.5 | 18.9 | 18.7 | 16.3 | 17.5 | 14.1 |
| Vehicle purchases | 8.2 | 12.9 | 8.4 | 8.5 | 7.9 | 8.0 | 6.7 | 6.8 | 6.5 |
| Gasoline and motor oil | 3.5 | 4.3 | 3.6 | 3.4 | 3.6 | 3.8 | 3.1 | 3.6 | 2.4 |
| Other vehicle expenses | 5.9 | 5.9 | 6.1 | 5.8 | 6.2 | 5.8 | 5.1 | 5.7 | 4.1 |
| Public transportation | 1.0 | .9 | .9 | .8 | 1.2 | 1.1 | 1.3 | 1.4 | 1.1 |
| Health care | 5.1 | 2.1 | 3.4 | 3.8 | 3.9 | 6.3 | 11.3 | 9.4 | 14.8 |
| Entertainment | 5.1 | 5.6 | 5.2 | 5.8 | 5.1 | 4.8 | 3.8 | 4.0 | 3.4 |
| Personal care products and services | 1.3 | 1.5 | 1.3 | 1.2 | 1.3 | 1.4 | 1.5 | 1.5 | 1.4 |
| Reading | .6 | .5 | .5 | .5 | .5 | .6 | .7 | .7 | .7 |
| Education | 1.3 | 4.0 | .9 | 1.4 | 2.0 | .9 | .4 | .5 | .2 |
| Tobacco products and smoking supplies | 9 | 1.2 | .9 | .9 | .9 | 1.1 | .8 | .9 | .6 |
| Miscellaneous | 2.3 | 1.6 | 2.2 | 2.5 | 2.4 | 2.3 | 2.3 | 2.4 | 2.1 |
| Cash contributions | 3.2 | .7 | 1.9 | 2.6 | 3.9 | 4.0 | 5.8 | 4.8 | 7.5 |
| Personal insurance and pensions | 8.9 | 6.1 | 9.5 | 10.4 | 10.3 | 9.3 | 3.9 | 5.0 | 1.9 |
| Life and other personal insurance | 1.2 | .5 | .9 | 1.4 | 1.3 | 1.4 | 1.5 | 1.7 | 1.1 |
| Pensions and Social Security | 7.6 | 5.6 | 8.5 | 9.0 | 9.0 | 8.0 | 2.4 | 3.3 | .7 |

See footnotes at end of table.

## Table 38. Shares of average annual expenditures and characteristics of all consumer units classified by age of the reference person, Consumer Expenditure Survey, 1989 and 1999—Continued

| Item | All consumer units | Under 25 | 25-34 | 35-44 | 45-54 | 55-64 | 65 and over | 65-74 | 75 and over |
|---|---|---|---|---|---|---|---|---|---|
| 1999 | | | | | | | | | |
| Number of consumer units (in thousands) | 108,465 | 8,164 | 19,332 | 24,405 | 20,903 | 13,647 | 22,015 | 11,578 | 10,437 |
| Consumer unit characteristics: | | | | | | | | | |
| Income before taxes [1] | $43,951 | $18,276 | $42,470 | $53,579 | $59,822 | $49,436 | $26,581 | $28,928 | $23,937 |
| Age of reference person | 47.9 | 21.4 | 29.7 | 39.5 | 49.2 | 59.1 | 74.8 | 69.3 | 80.8 |
| Average number in consumer unit: | | | | | | | | | |
| Persons | 2.5 | 1.8 | 2.9 | 3.2 | 2.7 | 2.2 | 1.7 | 1.9 | 1.5 |
| Children under 18 | .7 | .4 | 1.1 | 1.3 | .6 | .2 | .1 | .1 | (2) |
| Persons 65 and over | .3 | (2) | (2) | (2) | (2) | .1 | 1.4 | 1.4 | 1.3 |
| Earners | 1.3 | 1.3 | 1.5 | 1.7 | 1.8 | 1.3 | .4 | .6 | .2 |
| Vehicles | 1.9 | 1.1 | 1.7 | 2.1 | 2.5 | 2.2 | 1.5 | 1.8 | 1.2 |
| Percent homeowner | 65 | 13 | 45 | 67 | 77 | 80 | 80 | 82 | 77 |
| Average annual expenditures | $36,995 | $21,704 | $36,158 | $42,792 | $46,511 | $39,394 | $26,521 | $29,864 | $22,884 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 13.6 | 15.5 | 14.2 | 14.3 | 12.8 | 12.8 | 13.2 | 13.9 | 12.4 |
| Food at home | 7.9 | 8.4 | 8.0 | 8.3 | 7.2 | 7.4 | 8.5 | 8.6 | 8.5 |
| Cereals and bakery products | 1.2 | 1.2 | 1.2 | 1.3 | 1.1 | 1.1 | 1.3 | 1.3 | 1.4 |
| Meats, poultry, fish, and eggs | 2.0 | 2.2 | 2.1 | 2.1 | 1.9 | 1.9 | 2.1 | 2.2 | 2.0 |
| Dairy products | .9 | .9 | .9 | 1.0 | .8 | .8 | 1.0 | 1.0 | 1.0 |
| Fruits and vegetables | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | 1.3 | 1.7 | 1.7 | 1.8 |
| Other food at home | 2.4 | 2.8 | 2.5 | 2.6 | 2.2 | 2.3 | 2.4 | 2.4 | 2.4 |
| Food away from home | 5.7 | 7.0 | 6.2 | 6.0 | 5.6 | 5.4 | 4.7 | 5.3 | 3.9 |
| Alcoholic beverages | .9 | 1.7 | 1.0 | .9 | .7 | .8 | .6 | .7 | .5 |
| Housing | 32.6 | 30.3 | 34.6 | 33.2 | 31.2 | 30.7 | 33.7 | 32.2 | 35.9 |
| Shelter | 19.0 | 19.1 | 21.1 | 20.1 | 18.3 | 16.9 | 17.3 | 16.5 | 18.3 |
| Owned dwellings | 12.2 | 2.7 | 10.9 | 14.3 | 13.3 | 12.2 | 11.2 | 11.5 | 10.8 |
| Rented dwellings | 5.5 | 15.2 | 9.5 | 5.0 | 3.3 | 3.1 | 4.5 | 3.2 | 6.2 |
| Other lodging | 1.3 | 1.1 | .6 | .9 | 1.7 | 1.6 | 1.6 | 1.8 | 1.3 |
| Utilities, fuels, and public services | 6.4 | 5.4 | 6.2 | 6.0 | 6.1 | 6.6 | 8.1 | 7.9 | 8.3 |
| Household operations | 1.8 | .8 | 2.1 | 1.9 | 1.3 | 1.2 | 2.8 | 1.5 | 4.7 |
| Housekeeping supplies | 1.3 | 1.0 | 1.2 | 1.4 | 1.2 | 1.4 | 1.6 | 1.7 | 1.5 |
| Household furnishings and equipment | 4.1 | 4.0 | 4.0 | 3.7 | 4.3 | 4.5 | 4.0 | 4.5 | 3.2 |
| Apparel and services | 4.7 | 5.5 | 5.7 | 4.8 | 4.4 | 4.4 | 4.0 | 4.1 | 3.9 |
| Transportation | 19.0 | 23.2 | 19.8 | 18.8 | 19.4 | 18.6 | 16.5 | 18.3 | 14.0 |
| Vehicle purchases (net outlay) | 8.9 | 13.2 | 9.7 | 8.9 | 8.9 | 8.6 | 7.2 | 8.1 | 5.9 |
| Gasoline and motor oil | 2.9 | 3.3 | 2.9 | 2.9 | 2.9 | 2.8 | 2.4 | 2.7 | 2.0 |
| Other vehicle expenses | 6.1 | 5.8 | 6.2 | 6.0 | 6.6 | 5.9 | 5.4 | 5.8 | 4.9 |
| Public transportation | 1.1 | 1.0 | .9 | 1.0 | 1.0 | 1.2 | 1.5 | 1.7 | 1.1 |
| Health care | 5.3 | 2.5 | 3.2 | 3.8 | 4.7 | 6.2 | 11.4 | 10.0 | 13.3 |
| Entertainment | 5.1 | 5.3 | 4.9 | 5.3 | 5.1 | 5.5 | 4.7 | 5.2 | 3.8 |
| Personal care products and services | 1.1 | 1.2 | 1.1 | 1.1 | 1.0 | 1.1 | 1.3 | 1.2 | 1.3 |
| Reading | .4 | .3 | .3 | .4 | .5 | .5 | .6 | .6 | .6 |
| Education | 1.7 | 5.9 | 1.3 | 1.5 | 2.4 | 1.4 | .5 | .6 | .5 |
| Tobacco products and smoking supplies | .8 | 1.0 | .8 | .9 | .8 | .8 | .6 | .7 | .4 |
| Miscellaneous | 2.3 | 1.6 | 2.0 | 2.2 | 2.3 | 2.6 | 3.0 | 2.6 | 3.5 |
| Cash contributions | 3.2 | .8 | 1.6 | 2.5 | 3.0 | 4.4 | 6.1 | 5.6 | 6.9 |
| Personal insurance and pensions | 9.3 | 5.1 | 9.5 | 10.4 | 11.6 | 10.0 | 3.7 | 4.3 | 2.8 |
| Life and other personal insurance | 1.1 | .3 | .7 | 1.0 | 1.3 | 1.4 | 1.3 | 1.4 | 1.0 |
| Pensions and Social Security | 8.2 | 4.8 | 8.8 | 9.4 | 10.3 | 8.7 | 2.4 | 2.8 | 1.8 |

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[1] Components of income and taxes are derived from "complete income reporters" only; see glossary.

[2] Value less than 0.05.

## able 39. Shares of average annual expenditures and characteristics of all consumer units lassified by composition of the consumer unit, Consumer Expenditure Survey, 1989 and 1999

| Item | Husband and wife consumer units | | | | | | | One parent, at least one child under 18 | Single person and other consumer units |
|---|---|---|---|---|---|---|---|---|---|
| | Total husband and wife consumer units | Husband and wife only | Husband and wife with children | | | | Other husband and wife consumer units | | |
| | | | Total husband and wife with children | Oldest child under 6 | Oldest child 6 to 17 | Oldest child 18 or over | | | |
| 1989 | | | | | | | | | |
| umber of consumer units (in thousands) | 52,728 | 20,883 | 28,271 | 6,265 | 13,721 | 8,285 | 3,574 | 5,561 | 37,528 |
| onsumer unit characteristics: | | | | | | | | | |
| Income before taxes [1] | $40,913 | $37,183 | $43,576 | $37,601 | $43,486 | $48,660 | $42,171 | $17,416 | $20,260 |
| Age of reference person | 47.4 | 56.1 | 40.9 | 30.7 | 38.8 | 51.9 | 47.9 | 35.3 | 48.7 |
| verage number in consumer unit: | | | | | | | | | |
| Persons | 3.2 | 2.0 | 3.9 | 3.5 | 4.1 | 3.9 | 4.9 | 2.9 | 1.6 |
| Children under 18 | .9 | n.a. | 1.5 | 1.5 | 2.1 | .6 | 1.6 | 1.8 | .2 |
| Persons 65 and over | .3 | .7 | .1 | (2) | (2) | .2 | .5 | (2) | .3 |
| Earners | 1.8 | 1.2 | 2.1 | 1.7 | 1.9 | 2.7 | 2.4 | 1.0 | .9 |
| Vehicles | 2.6 | 2.3 | 2.9 | 2.2 | 2.7 | 3.6 | 2.9 | 1.0 | 1.3 |
| ercent homeowner | 78 | 80 | 77 | 64 | 77 | 89 | 77 | 34 | 44 |
| verage annual expenditures | $34,826 | $30,604 | $37,580 | $33,791 | $37,644 | $40,433 | $37,705 | $19,186 | $19,087 |
| ercent distribution | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 14.9 | 14.3 | 15.1 | 13.7 | 15.6 | 15.4 | 16.8 | 17.8 | 14.2 |
| Food at home | 8.7 | 7.9 | 8.9 | 8.5 | 9.2 | 8.7 | 11.4 | 11.6 | 7.6 |
| Cereals and bakery products | 1.3 | 1.2 | 1.4 | 1.2 | 1.5 | 1.3 | 1.7 | 1.8 | 1.1 |
| Meats, poultry, fish, and eggs | 2.2 | 2.0 | 2.3 | 2.0 | 2.3 | 2.5 | 2.9 | 3.0 | 1.9 |
| Dairy products | 1.1 | 1.0 | 1.1 | 1.2 | 1.2 | 1.0 | 1.5 | 1.5 | 1.0 |
| Fruits and vegetables | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.9 | 1.9 | 1.4 |
| Other food at home | 2.6 | 2.2 | 2.7 | 2.7 | 2.8 | 2.5 | 3.4 | 3.4 | 2.3 |
| Food away from home | 6.2 | 6.5 | 6.2 | 5.2 | 6.3 | 6.6 | 5.4 | 6.2 | 6.5 |
| Alcoholic beverages | .8 | 1.0 | .8 | .9 | .7 | .8 | .9 | .7 | 1.5 |
| Housing | 30.0 | 30.5 | 29.9 | 34.4 | 30.4 | 26.1 | 28.8 | 35.8 | 32.7 |
| Shelter | 16.4 | 16.6 | 16.3 | 18.2 | 17.1 | 13.8 | 15.3 | 19.7 | 19.8 |
| Owned dwellings | 11.3 | 10.9 | 11.7 | 12.4 | 12.3 | 10.5 | 9.9 | 7.9 | 7.9 |
| Rented dwellings | 3.1 | 3.3 | 3.0 | 4.9 | 3.2 | 1.4 | 3.4 | 11.0 | 10.4 |
| Other lodging | 1.9 | 2.4 | 1.6 | 1.0 | 1.6 | 2.0 | 1.9 | .9 | 1.5 |
| Utilities, fuels, and public services | 6.3 | 6.4 | 6.2 | 5.7 | 6.1 | 6.5 | 7.1 | 8.4 | 7.1 |
| Household operations | 1.8 | 1.2 | 2.1 | 4.4 | 1.9 | .9 | 1.6 | 3.0 | 1.2 |
| Housekeeping supplies | 1.5 | 1.6 | 1.4 | 1.6 | 1.4 | 1.4 | 1.4 | 1.5 | 1.2 |
| Household furnishings and equipment | 4.1 | 4.7 | 3.9 | 4.4 | 3.9 | 3.5 | 3.4 | 3.2 | 3.4 |
| Apparel and services | 5.6 | 5.4 | 5.7 | 5.7 | 5.9 | 5.3 | 5.2 | 7.9 | 5.7 |
| Transportation | 19.3 | 18.5 | 19.5 | 18.8 | 18.6 | 21.4 | 20.5 | 16.0 | 17.6 |
| Vehicle purchases | 8.7 | 8.0 | 9.1 | 9.2 | 8.7 | 9.6 | 9.7 | 7.3 | 7.2 |
| Gasoline and motor oil | 3.6 | 3.5 | 3.7 | 3.3 | 3.6 | 4.2 | 3.8 | 2.9 | 3.4 |
| Other vehicle expenses | 6.0 | 5.9 | 6.0 | 5.8 | 5.6 | 6.7 | 6.0 | 4.8 | 5.8 |
| Public transportation | .9 | 1.2 | .8 | .5 | .7 | .9 | 1.0 | 1.0 | 1.3 |
| Health care | 5.1 | 6.5 | 4.2 | 4.0 | 4.2 | 4.4 | 5.4 | 3.5 | 5.2 |
| Entertainment | 5.4 | 4.6 | 5.9 | 5.7 | 5.8 | 6.2 | 5.4 | 4.7 | 4.5 |
| Personal care products and services | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.6 | 1.4 |
| Reading | .5 | .6 | .5 | .5 | .5 | .5 | .5 | .5 | .6 |
| Education | 1.2 | .6 | 1.6 | .4 | 1.5 | 2.5 | 1.2 | 1.0 | 1.6 |
| Tobacco products and smoking supplies | .8 | .8 | .8 | .8 | .8 | .9 | 1.0 | 1.0 | 1.2 |
| Miscellaneous | 2.1 | 2.1 | 2.1 | 1.7 | 2.2 | 2.2 | 2.4 | 2.5 | 2.8 |
| Cash contributions | 3.2 | 4.5 | 2.5 | 1.6 | 2.3 | 3.3 | 2.6 | 1.2 | 3.6 |
| Personal insurance and pensions | 9.6 | 9.1 | 10.1 | 10.6 | 10.2 | 9.8 | 8.2 | 6.1 | 7.5 |
| Life and other personal insurance | 1.4 | 1.5 | 1.3 | 1.3 | 1.3 | 1.4 | 1.3 | .8 | .9 |
| Pensions and Social Security | 8.2 | 7.6 | 8.8 | 9.3 | 8.8 | 8.4 | 6.9 | 5.3 | 6.6 |

See footnotes at end of table.

## Table 39. Shares of average annual expenditures and characteristics of all consumer units classified by composition of the consumer unit, Consumer Expenditure Survey, 1989 and 1999—Continued

| Item | Husband and wife consumer units | | | | | | | One parent, at least one child under 18 | Single person and other consumer units |
|---|---|---|---|---|---|---|---|---|---|
| | Total husband and wife consumer units | Husband and wife only | Husband and wife with children | | | | Other husband and wife consumer units | | |
| | | | Total husband and wife with children | Oldest child under 6 | Oldest child 6 to 17 | Oldest child 18 or over | | | |
| 1999 | | | | | | | | | |
| Number of consumer units (in thousands) | 56,429 | 23,406 | 28,535 | 5,304 | 15,378 | 7,853 | 4,488 | 6,571 | 45,465 |
| Consumer unit characteristics: . | | | | | | | | | |
| Income before taxes [1] | $59,126 | $54,062 | $63,666 | $57,922 | $63,558 | $68,094 | $56,519 | $25,685 | $28,281 |
| Age of reference person | 48.2 | 56.8 | 41.2 | 31.7 | 39.5 | 50.9 | 48.4 | 36.3 | 49.2 |
| Average number in consumer unit: | | | | | | | | | |
| Persons | 3.2 | 2.0 | 3.9 | 3.5 | 4.1 | 3.9 | 4.9 | 2.9 | 1.6 |
| Children under 18 | .9 | n.a. | 1.6 | 1.5 | 2.1 | .6 | 1.5 | 1.8 | .2 |
| Persons 65 and over | .3 | .7 | .1 | (2) | (2) | .2 | .4 | (2) | .3 |
| Earners | 1.7 | 1.2 | 2.0 | 1.6 | 1.8 | 2.6 | 2.4 | 1.1 | .9 |
| Vehicles | 2.6 | 2.4 | 2.7 | 2.1 | 2.6 | 3.2 | 2.9 | 1.2 | 1.3 |
| Percent homeowner | 81 | 84 | 79 | 67 | 79 | 86 | 76 | 39 | 49 |
| Average annual expenditures | $47,149 | $42,133 | $51,154 | $46,085 | $51,453 | $54,214 | $47,942 | $27,900 | $25,835 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 13.5 | 12.8 | 13.8 | 11.7 | 14.5 | 13.7 | 15.5 | 16.2 | 13.6 |
| Food at home | 7.8 | 7.1 | 8.1 | 7.3 | 8.5 | 7.9 | 9.4 | 10.5 | 7.7 |
| Cereals and bakery products | 1.2 | 1.1 | 1.3 | 1.1 | 1.4 | 1.2 | 1.4 | 1.8 | 1.2 |
| Meats, poultry, fish, and eggs | 2.0 | 1.8 | 2.0 | 1.7 | 2.1 | 2.1 | 2.6 | 2.8 | 2.0 |
| Dairy products | .9 | .8 | .9 | .9 | 1.0 | .9 | 1.0 | 1.1 | .8 |
| Fruits and vegetables | 1.3 | 1.3 | 1.3 | 1.2 | 1.4 | 1.3 | 1.7 | 1.6 | 1.3 |
| Other food at home | 2.4 | 2.2 | 2.5 | 2.4 | 2.6 | 2.4 | 2.8 | 3.2 | 2.4 |
| Food away from home | 5.7 | 5.6 | 5.6 | 4.4 | 6.0 | 5.8 | 6.0 | 5.7 | 5.9 |
| Alcoholic beverages | .7 | .9 | .6 | .6 | .6 | .5 | .6 | .5 | 1.2 |
| Housing | 31.4 | 30.8 | 32.0 | 37.3 | 31.9 | 29.0 | 30.0 | 36.2 | 34.7 |
| Shelter | 17.8 | 17.3 | 18.4 | 21.9 | 18.4 | 16.3 | 16.6 | 21.1 | 21.1 |
| Owned dwellings | 13.6 | 12.7 | 14.4 | 16.4 | 14.7 | 12.7 | 12.1 | 9.5 | 9.5 |
| Rented dwellings | 2.9 | 2.8 | 2.9 | 4.9 | 2.8 | 1.9 | 3.6 | 11.1 | 10.4 |
| Other lodging | 1.4 | 1.8 | 1.1 | .6 | .9 | 1.8 | 1.0 | .5 | 1.2 |
| Utilities, fuels, and public services | 6.1 | 6.1 | 5.9 | 5.6 | 5.8 | 6.1 | 6.9 | 7.9 | 7.0 |
| Household operations | 1.8 | 1.3 | 2.2 | 4.6 | 2.1 | 1.0 | 1.5 | 2.5 | 1.7 |
| Housekeeping supplies | 1.4 | 1.5 | 1.4 | 1.2 | 1.5 | 1.5 | 1.3 | 1.3 | 1.2 |
| Household furnishings and equipment | 4.2 | 4.6 | 4.0 | 4.0 | 4.1 | 4.1 | 3.6 | 3.5 | 3.8 |
| Apparel and services | 4.6 | 4.0 | 4.9 | 4.5 | 5.2 | 4.6 | 5.3 | 7.0 | 4.6 |
| Transportation | 19.7 | 19.1 | 20.0 | 20.3 | 18.6 | 22.2 | 20.4 | 16.8 | 17.5 |
| Vehicle purchases (net outlay) | 9.4 | 9.0 | 9.7 | 10.5 | 9.2 | 10.0 | 9.1 | 8.1 | 8.0 |
| Gasoline and motor oil | 2.9 | 2.7 | 3.0 | 2.8 | 2.8 | 3.4 | 3.4 | 2.6 | 2.7 |
| Other vehicle expenses | 6.3 | 6.1 | 6.4 | 6.3 | 5.8 | 7.7 | 6.7 | 5.3 | 5.7 |
| Public transportation | 1.1 | 1.4 | .9 | .7 | .8 | 1.1 | 1.1 | .8 | 1.1 |
| Health care | 5.3 | 6.9 | 4.3 | 3.7 | 4.2 | 4.9 | 5.3 | 3.6 | 5.4 |
| Entertainment | 5.3 | 5.4 | 5.4 | 4.6 | 6.1 | 4.7 | 4.4 | 4.9 | 4.6 |
| Personal care products and services | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 | 1.3 | 1.2 |
| Reading | .4 | .5 | .4 | .3 | .4 | .4 | .3 | .3 | .5 |
| Education | 1.8 | 1.3 | 2.2 | .7 | 2.0 | 3.4 | 1.2 | 1.5 | 1.6 |
| Tobacco products and smoking supplies | .7 | .6 | .7 | .5 | .7 | .7 | 1.0 | .9 | 1.1 |
| Miscellaneous | 2.2 | 2.2 | 2.1 | 2.4 | 1.9 | 2.2 | 2.8 | 3.0 | 2.7 |
| Cash contributions | 3.1 | 4.2 | 2.3 | 1.8 | 2.3 | 2.7 | 3.0 | 1.3 | 3.7 |
| Personal insurance and pensions | 10.2 | 10.2 | 10.4 | 10.7 | 10.5 | 9.9 | 9.2 | 6.5 | 7.6 |
| Life and other personal insurance | 1.3 | 1.3 | 1.3 | .9 | 1.4 | 1.3 | 1.3 | .6 | .7 |
| Pensions and Social Security | 8.9 | 8.9 | 9.1 | 9.9 | 9.1 | 8.6 | 7.9 | 5.9 | 6.9 |

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[1] Components of income and taxes are derived from "complete income reporters" only; see glossary.

[2] Value less than 0.05.

n.a. Not applicable.

Table 40. **Shares of average annual expenditures and characteristics of all consumer units classified by region of residence, Consumer Expenditure Survey, 1989 and 1999**

| Item | All consumer units | Northeast | Midwest | South | West |
|---|---|---|---|---|---|
| 1989 | | | | | |
| Number of consumer units (in thousands) | 95,818 | 20,101 | 24,351 | 31,935 | 19,430 |
| Consumer unit characteristics: | | | | | |
| Income before taxes [1] | $31,308 | $34,122 | $29,452 | $29,669 | $33,372 |
| Age of reference person | 47.2 | 48.6 | 46.9 | 47.4 | 45.8 |
| Average number in consumer unit | | | | | |
| Persons | 2.6 | 2.5 | 2.6 | 2.6 | 2.6 |
| Children under 18 | .7 | .6 | .7 | .7 | .7 |
| Persons 65 and over | .3 | .3 | .3 | .3 | .3 |
| Earners | 1.4 | 1.4 | 1.4 | 1.3 | 1.4 |
| Vehicles | 2.0 | 1.6 | 2.2 | 2.0 | 2.2 |
| Percent homeowner | 63 | 60 | 65 | 65 | 58 |
| Average annual expenditures | $27,810 | $28,241 | $26,062 | $26,232 | $32,144 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 14.9 | 15.7 | 15.1 | 14.7 | 14.4 |
| Food at home | 8.6 | 8.7 | 8.6 | 8.6 | 8.6 |
| Cereals and bakery products | 1.3 | 1.4 | 1.3 | 1.3 | 1.2 |
| Meats, poultry, fish, and eggs | 2.2 | 2.3 | 2.1 | 2.2 | 2.1 |
| Dairy products | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| Fruits and vegetables | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 |
| Other food at home | 2.5 | 2.3 | 2.6 | 2.6 | 2.6 |
| Food away from home | 6.3 | 7.0 | 6.5 | 6.2 | 5.8 |
| Alcoholic beverages | 1.0 | 1.1 | 1.1 | .9 | 1.1 |
| Housing | 31.0 | 32.7 | 29.8 | 30.0 | 31.9 |
| Shelter | 17.4 | 19.3 | 15.8 | 15.5 | 19.7 |
| Owned dwellings | 10.2 | 11.0 | 9.9 | 9.0 | 11.6 |
| Rented dwellings | 5.4 | 6.3 | 4.3 | 4.8 | 6.4 |
| Other lodging | 1.7 | 2.0 | 1.6 | 1.7 | 1.7 |
| Utilities, fuels, and public services | 6.6 | 6.8 | 7.0 | 7.2 | 5.2 |
| Household operations | 1.7 | 1.6 | 1.5 | 1.8 | 1.8 |
| Housekeeping supplies | 1.4 | 1.4 | 1.5 | 1.5 | 1.3 |
| Household furnishings and equipment | 3.9 | 3.7 | 4.0 | 4.0 | 3.9 |
| Apparel and services | 5.7 | 6.0 | 5.7 | 5.4 | 5.8 |
| Transportation | 18.7 | 16.8 | 19.1 | 18.9 | 19.6 |
| Vehicle purchases | 8.2 | 6.7 | 8.3 | 8.3 | 9.5 |
| Gasoline and motor oil | 3.5 | 3.0 | 3.8 | 4.1 | 3.1 |
| Other vehicle expenses | 5.9 | 5.7 | 6.1 | 5.8 | 5.8 |
| Public transportation | 1.0 | 1.4 | .8 | .8 | 1.2 |
| Health care | 5.1 | 4.6 | 5.1 | 5.7 | 4.5 |
| Entertainment | 5.1 | 5.6 | 4.8 | 5.0 | 5.2 |
| Personal care products and services | 1.3 | 1.3 | 1.3 | 1.4 | 1.3 |
| Reading | .6 | .6 | .6 | .5 | .5 |
| Education | 1.3 | 1.6 | 1.5 | 1.2 | 1.1 |
| Tobacco products and smoking supplies | .9 | .9 | 1.1 | 1.0 | .7 |
| Miscellaneous | 2.3 | 2.0 | 2.4 | 2.4 | 2.4 |
| Cash contributions | 3.2 | 2.5 | 3.2 | 4.0 | 2.9 |
| Personal insurance and pensions | 8.9 | 8.8 | 9.4 | 8.9 | 8.6 |
| Life and other personal insurance | 1.2 | 1.2 | 1.3 | 1.5 | .9 |
| Pensions and Social Security | 7.6 | 7.6 | 8.1 | 7.4 | 7.6 |

See footnote at end of table.

Table 40. **Shares of average annual expenditures and characteristics of all consumer units classified by region of residence, Consumer Expenditure Survey, 1989 and 1999—Continued**

| Item | All consumer units | Northeast | Midwest | South | West |
|---|---|---|---|---|---|
| 1999 | | | | | |
| Number of consumer units (in thousands) | 108,465 | 20,979 | 25,765 | 37,816 | 23,906 |
| Consumer unit characteristics: | | | | | |
| Income before taxes [1] | $43,951 | $48,307 | $41,983 | $40,387 | $47,494 |
| Age of reference person | 47.9 | 49.3 | 48.4 | 47.6 | 46.6 |
| Average number in consumer unit: | | | | | |
| Persons | 2.5 | 2.5 | 2.5 | 2.5 | 2.6 |
| Children under 18 | .7 | .6 | .7 | .7 | .7 |
| Persons 65 and over | .3 | .3 | .3 | .3 | .3 |
| Earners | 1.3 | 1.4 | 1.4 | 1.3 | 1.4 |
| Vehicles | 1.9 | 1.6 | 2.1 | 1.9 | 2.0 |
| Percent homeowner | 65 | 63 | 69 | 67 | 59 |
| Average annual expenditures | $36,995 | $38,403 | $36,302 | $33,303 | $42,335 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 13.6 | 14.3 | 13.4 | 13.9 | 12.9 |
| Food at home | 7.9 | 8.0 | 7.5 | 8.2 | 7.7 |
| Cereals and bakery products | 1.2 | 1.3 | 1.2 | 1.3 | 1.1 |
| Meats, poultry, fish, and eggs | 2.0 | 2.2 | 1.8 | 2.2 | 1.9 |
| Dairy products | .9 | .9 | .8 | .9 | .8 |
| Fruits and vegetables | 1.4 | 1.5 | 1.2 | 1.4 | 1.4 |
| Other food at home | 2.4 | 2.2 | 2.5 | 2.5 | 2.4 |
| Food away from home | 5.7 | 6.2 | 5.9 | 5.9 | 5.2 |
| Alcoholic beverages | .9 | 1.0 | .9 | .8 | .9 |
| Housing | 32.6 | 34.8 | 31.7 | 31.0 | 33.5 |
| Shelter | 19.0 | 21.5 | 17.9 | 16.6 | 20.9 |
| Owned dwellings | 12.2 | 13.8 | 12.3 | 10.6 | 12.9 |
| Rented dwellings | 5.5 | 6.3 | 4.4 | 4.9 | 6.5 |
| Other lodging | 1.3 | 1.4 | 1.2 | 1.1 | 1.5 |
| Utilities, fuels, and public services | 6.4 | 6.4 | 6.6 | 7.3 | 5.1 |
| Household operations | 1.8 | 1.7 | 1.6 | 1.7 | 2.2 |
| Housekeeping supplies | 1.3 | 1.3 | 1.5 | 1.4 | 1.2 |
| Household furnishings and equipment | 4.1 | 3.9 | 4.1 | 4.0 | 4.1 |
| Apparel and services | 4.7 | 4.7 | 4.4 | 4.8 | 4.9 |
| Transportation | 18.9 | 16.8 | 19.1 | 20.6 | 18.4 |
| Vehicle purchases (net outlay) | 8.9 | 7.0 | 9.3 | 10.4 | 8.3 |
| Gasoline and motor oil | 2.9 | 2.4 | 2.9 | 3.2 | 2.8 |
| Other vehicle expenses | 6.1 | 6.0 | 6.0 | 6.1 | 6.2 |
| Public transportation | 1.1 | 1.4 | 1.0 | .9 | 1.2 |
| Health care | 5.3 | 4.7 | 5.7 | 5.9 | 4.6 |
| Entertainment | 5.1 | 4.8 | 5.7 | 4.7 | 5.4 |
| Personal care products and services | 1.1 | 1.1 | 1.1 | 1.2 | 1.1 |
| Reading | .4 | .5 | .5 | .4 | .4 |
| Education | 1.7 | 2.4 | 1.6 | 1.4 | 1.7 |
| Tobacco products and smoking supplies | .8 | .8 | 1.0 | .9 | .5 |
| Miscellaneous | 2.3 | 2.2 | 2.4 | 2.3 | 2.5 |
| Cash contributions | 3.2 | 2.9 | 3.2 | 3.4 | 3.2 |
| Personal insurance and pensions | 9.3 | 9.1 | 9.4 | 8.8 | 9.9 |
| Life and other personal insurance | 1.1 | 1.0 | 1.0 | 1.2 | .9 |
| Pensions and Social Security | 8.2 | 8.1 | 8.4 | 7.6 | 9.0 |

[1] Components of income and taxes are derived from "complete income reporters" only; see glossary.

Table 41. **Shares of average annual expenditures and characteristics of all consumer units classified by origin of the reference person, Consumer Expenditure Survey, 1989 and 1999**

| Item | All consumer units | Hispanic | Non-Hispanic | | |
|---|---|---|---|---|---|
| | | | Total Non-Hispanic | Non-Hispanic less Afro-American | Afro-American |
| 1989 | | | | | |
| Number of consumer units (in thousands) | 95,818 | 5,857 | 89,960 | 80,961 | 8,999 |
| Consumer unit characteristics: | | | | | |
| Income before taxes [1] | $31,308 | $23,098 | $31,863 | $33,007 | $21,270 |
| Age of reference person | 47.2 | 40.6 | 47.6 | 47.9 | 45.4 |
| Average number in consumer unit: | | | | | |
| Persons | 2.6 | 3.3 | 2.5 | 2.5 | 2.8 |
| Children under 18 | .7 | 1.2 | .7 | .6 | 1.1 |
| Persons 65 and over | .3 | .1 | .3 | .3 | .2 |
| Earners | 1.4 | 1.6 | 1.4 | 1.4 | 1.2 |
| Vehicles | 2.0 | 1.5 | 2.0 | 2.1 | 1.1 |
| Percent homeowner | 63 | 36 | 64 | 67 | 41 |
| Average annual expenditures | $27,810 | $23,226 | $28,106 | $29,201 | $18,294 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 14.9 | 18.9 | 14.7 | 14.6 | 16.1 |
| Food at home | 8.6 | 12.1 | 8.4 | 8.3 | 10.5 |
| Cereals and bakery products | 1.3 | 1.7 | 1.3 | 1.3 | 1.5 |
| Meats, poultry, fish, and eggs | 2.2 | 3.5 | 2.1 | 2.0 | 3.6 |
| Dairy products | 1.1 | 1.5 | 1.1 | 1.1 | 1.1 |
| Fruits and vegetables | 1.5 | 2.2 | 1.4 | 1.4 | 1.8 |
| Other food at home | 2.5 | 3.2 | 2.5 | 2.5 | 2.7 |
| Food away from home | 6.3 | 6.8 | 6.3 | 6.4 | 5.6 |
| Alcoholic beverages | 1.0 | 1.0 | 1.0 | 1.0 | .8 |
| Housing | 31.0 | 33.9 | 30.8 | 30.5 | 34.4 |
| Shelter | 17.4 | 21.4 | 17.2 | 17.0 | 19.0 |
| Owned dwellings | 10.2 | 8.7 | 10.3 | 10.5 | 7.6 |
| Rented dwellings | 5.4 | 11.8 | 5.0 | 4.7 | 10.7 |
| Other lodging | 1.7 | .9 | 1.8 | 1.9 | .8 |
| Utilities, fuels, and public services | 6.6 | 6.4 | 6.6 | 6.4 | 9.9 |
| Household operations | 1.7 | 1.5 | 1.7 | 1.7 | 1.2 |
| Housekeeping supplies | 1.4 | 1.5 | 1.4 | 1.4 | 1.3 |
| Household furnishings and equipment | 3.9 | 3.1 | 4.0 | 4.0 | 3.1 |
| Apparel and services | 5.7 | 7.0 | 5.6 | 5.5 | 6.9 |
| Transportation | 18.7 | 17.5 | 18.7 | 18.8 | 17.4 |
| Vehicle purchases (net outlay) | 8.2 | 8.3 | 8.2 | 8.3 | 6.8 |
| Gasoline and motor oil | 3.5 | 3.3 | 3.6 | 3.6 | 3.5 |
| Other vehicle expenses | 5.9 | 4.7 | 5.9 | 5.9 | 5.9 |
| Public transportation | 1.0 | 1.2 | 1.0 | 1.0 | 1.2 |
| Health care | 5.1 | 3.3 | 5.2 | 5.2 | 3.8 |
| Entertainment | 5.1 | 4.0 | 5.2 | 5.3 | 3.1 |
| Personal care products and services | 1.3 | 1.5 | 1.3 | 1.3 | 1.5 |
| Reading | .6 | .3 | .6 | .6 | .4 |
| Education | 1.3 | .6 | 1.4 | 1.4 | 1.3 |
| Tobacco products and smoking supplies | .9 | .6 | 1.0 | .9 | 1.3 |
| Miscellaneous | 2.3 | 2.1 | 2.3 | 2.3 | 2.5 |
| Cash contributions | 3.2 | 1.7 | 3.3 | 3.4 | 1.9 |
| Personal insurance and pensions | 8.9 | 7.6 | 9.0 | 9.0 | 8.6 |
| Life and other personal insurance | 1.2 | .6 | 1.3 | 1.2 | 1.7 |
| Pensions and Social Security | 7.6 | 7.0 | 7.7 | 7.7 | 6.9 |

See footnote at end of table.

Table 41. **Shares of average annual expenditures and characteristics of all consumer units classified by origin of the reference person, Consumer Expenditure Survey, 1989 and 1999—Continued**

| Item | All consumer units | Hispanic | Non-Hispanic | | |
|---|---|---|---|---|---|
| | | | Total Non-Hispanic | Non-Hispanic less Afro-American | Afro-American |
| 1999 | | | | | |
| Number of consumer units (in thousands) | 108,465 | 9,111 | 99,354 | 87,924 | 11,431 |
| Consumer unit characteristics: | | | | | |
| Income before taxes [1] | $43,951 | $33,803 | $44,955 | $46,746 | $30,325 |
| Age of reference person | 47.9 | 41.2 | 48.5 | 49.0 | 45.0 |
| Average number in consumer unit: | | | | | |
| Persons | 2.5 | 3.5 | 2.4 | 2.4 | 2.7 |
| Children under 18 | .7 | 1.3 | .6 | .6 | .9 |
| Persons 65 and over | .3 | .2 | .3 | .3 | .2 |
| Earners | 1.3 | 1.6 | 1.3 | 1.3 | 1.3 |
| Vehicles | 1.9 | 1.6 | 2.0 | 2.0 | 1.3 |
| Percent homeowner | 65 | 44 | 67 | 69 | 48 |
| Average annual expenditures | $36,995 | $33,044 | $37,356 | $38,658 | $27,280 |
| Percent distribution: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Food | 13.6 | 16.6 | 13.3 | 13.2 | 15.0 |
| Food at home | 7.9 | 10.8 | 7.6 | 7.5 | 9.6 |
| Cereals and bakery products | 1.2 | 1.5 | 1.2 | 1.2 | 1.5 |
| Meats, poultry, fish, and eggs | 2.0 | 3.3 | 1.9 | 1.8 | 3.2 |
| Dairy products | .9 | 1.1 | .8 | .8 | .9 |
| Fruits and vegetables | 1.4 | 2.0 | 1.3 | 1.3 | 1.5 |
| Other food at home | 2.4 | 2.8 | 2.4 | 2.4 | 2.6 |
| Food away from home | 5.7 | 5.9 | 5.7 | 5.7 | 5.4 |
| Alcoholic beverages | .9 | .8 | .9 | .9 | .5 |
| Housing | 32.6 | 33.3 | 32.5 | 32.3 | 35.2 |
| Shelter | 19.0 | 20.5 | 18.8 | 18.8 | 19.8 |
| Owned dwellings | 12.2 | 9.6 | 12.4 | 12.7 | 9.9 |
| Rented dwellings | 5.5 | 10.3 | 5.1 | 4.7 | 9.4 |
| Other lodging | 1.3 | .5 | 1.3 | 1.4 | .5 |
| Utilities, fuels, and public services | 6.4 | 6.4 | 6.4 | 6.2 | 8.9 |
| Household operations | 1.8 | 1.4 | 1.8 | 1.8 | 1.6 |
| Housekeeping supplies | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Household furnishings and equipment | 4.1 | 3.6 | 4.1 | 4.1 | 3.6 |
| Apparel and services | 4.7 | 6.3 | 4.6 | 4.4 | 6.9 |
| Transportation | 19.0 | 20.6 | 18.8 | 18.8 | 18.9 |
| Vehicle purchases (net outlay) | 8.9 | 10.2 | 8.8 | 8.8 | 8.9 |
| Gasoline and motor oil | 2.9 | 3.4 | 2.8 | 2.8 | 2.8 |
| Other vehicle expenses | 6.1 | 6.0 | 6.1 | 6.1 | 6.3 |
| Public transportation | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 |
| Health care | 5.3 | 3.4 | 5.5 | 5.6 | 4.1 |
| Entertainment | 5.1 | 3.8 | 5.2 | 5.4 | 3.4 |
| Personal care products and services | 1.1 | 1.2 | 1.1 | 1.1 | 1.5 |
| Reading | .4 | .2 | .4 | .5 | .3 |
| Education | 1.7 | 1.1 | 1.8 | 1.8 | 1.4 |
| Tobacco products and smoking supplies | .8 | .5 | .8 | .8 | .8 |
| Miscellaneous | 2.3 | 1.9 | 2.4 | 2.4 | 2.1 |
| Cash contributions | 3.2 | 2.1 | 3.3 | 3.4 | 2.1 |
| Personal insurance and pensions | 9.3 | 8.2 | 9.4 | 9.5 | 7.8 |
| Life and other personal insurance | 1.1 | .6 | 1.1 | 1.1 | 1.2 |
| Pensions and Social Security | 8.2 | 7.7 | 8.3 | 8.4 | 6.6 |

[1] Components of income and taxes are derived from "complete income reporters" only: see glossary.

## Table 42. **Number of earners in families by type of family, selected years, 1989-99**

(In thousands)

| Characteristic | 1989 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|
| Total, all families | 66,623 | 69,211 | 69,971 | 70,174 | 70,840 | 71,443 | 72,056 | 72,574 |
| Married-couple families | 52,385 | 53,246 | 53,927 | 53,621 | 53,654 | 54,361 | 54,829 | 55,352 |
| No earners | 6,812 | 7,280 | 7,227 | 7,278 | 7,148 | 7,289 | 7,257 | 7,163 |
| One earner | 11,748 | 11,842 | 11,772 | 11,739 | 11,556 | 11,728 | 12,279 | 12,328 |
| Husband | 9,212 | 8,745 | 8,719 | 8,821 | 8,671 | 8,792 | 9,198 | 9,093 |
| Wife | 1,840 | 2,411 | 2,372 | 2,253 | 2,214 | 2,302 | 2,419 | 2,595 |
| Other family member | 695 | 687 | 681 | 664 | 671 | 634 | 662 | 640 |
| Two earners | 26,011 | 26,957 | 27,472 | 27,361 | 27,474 | 27,935 | 27,801 | 28,254 |
| Husband and wife | 23,929 | 24,806 | 25,377 | 25,478 | 25,536 | 25,959 | 25,928 | 26,401 |
| Husband and other family member | 1,657 | 1,540 | 1,533 | 1,365 | 1,443 | 1,412 | 1,288 | 1,307 |
| Husband is not an earner | 425 | 612 | 562 | 518 | 496 | 564 | 586 | 546 |
| Three earners or more | 7,815 | 7,166 | 7,455 | 7,243 | 7,476 | 7,409 | 7,492 | 7,607 |
| Husband and wife | 6,950 | 6,496 | 6,748 | 6,582 | 6,870 | 6,805 | 6,883 | 6,959 |
| Husband is an earner, not wife | 716 | 511 | 516 | 514 | 456 | 441 | 438 | 509 |
| Families maintained by women[1] | 11,309 | 12,974 | 12,768 | 12,998 | 13,269 | 13,112 | 13,198 | 13,148 |
| No earner | 2,510 | 3,111 | 2,855 | 2,679 | 2,586 | 2,342 | 2,156 | 1,889 |
| One earner | 5,530 | 6,495 | 6,581 | 6,868 | 7,112 | 7,146 | 7,433 | 7,515 |
| Householder | 4,468 | 5,367 | 5,495 | 5,657 | 5,906 | 5,903 | 6,253 | 6,207 |
| Other family member | 1,063 | 1,128 | 1,086 | 1,211 | 1,205 | 1,243 | 1,180 | 1,308 |
| Two earners or more | 3,268 | 3,368 | 3,332 | 3,452 | 3,572 | 3,623 | 3,609 | 3,744 |
| Householder and other family member(s) | 2,903 | 3,049 | 3,044 | 3,156 | 3,341 | 3,332 | 3,313 | 3,420 |
| Householder is not an earner | 365 | 319 | 289 | 296 | 230 | 291 | 296 | 324 |
| Families maintained by men[1] | 2,929 | 2,992 | 3,276 | 3,555 | 3,916 | 3,970 | 4,030 | 4,074 |
| No earner | 281 | 332 | 382 | 357 | 359 | 346 | 387 | 377 |
| One earner | 1,376 | 1,615 | 1,705 | 1,821 | 1,982 | 2,106 | 2,039 | 2,076 |
| Householder | 1,127 | 1,372 | 1,437 | 1,568 | 1,683 | 1,806 | 1,751 | 1,758 |
| Other family member | 249 | 242 | 268 | 253 | 298 | 301 | 288 | 318 |
| Two earners or more | 1,272 | 1,045 | 1,189 | 1,377 | 1,576 | 1,518 | 1,604 | 1,621 |
| Householder and other family member(s) | 1,201 | 983 | 1,118 | 1,278 | 1,454 | 1,413 | 1,506 | 1,481 |
| Householder is not an earner | 72 | 63 | 71 | 98 | 122 | 105 | 99 | 139 |

[1] Families maintained by widowed, divorced, separated, or single persons.

NOTE: Data on the number and type of families are collected in March of the subsequent year. Earner status refers to the preceding calendar year. The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Table 43. **Percent of employees participating in selected benefits, full- and part-time private and public sectors, 1996-98**[1]

| Leave benefit | All employees | Private sector |  | Public sector |  |
|---|---|---|---|---|---|
|  |  | Full-time | Part-time | Full-time | Part-time |
| Paid leave |  |  |  |  |  |
| Holidays | 72 | 85 | 29 | 73 | 31 |
| Vacations | 76 | 91 | 35 | 67 | 19 |
| Personal leave | 18 | 17 | 6 | 38 | 18 |
| Funeral leave | 57 | 66 | 22 | 65 | 38 |
| Jury duty leave | 67 | 73 | 28 | 95 | 50 |
| Military leave | 33 | 32 | 7 | 76 | 28 |
| Sick leave[2] | 51 | 53 | 13 | 96 | 43 |
| Unpaid family leave | 64 | 67[3] | 32[3] | 95 | 56 |
| Short-term disability plans[2] | 34 | 42[3] | 15 | 20 | 9 |
| Long-term disability insurance | 27 | 32 | 2 | 34 | 7 |
| Medical care | 61 | 70 | 11 | 86 | 37 |
| Dental care | 39 | 45[3] | 8[3] | 60 | 31 |
| Life Insurance | 64 | 74 | 11 | 89 | 42 |
| All retirement[4] | 59 | 62 | 20 | 98 | 62 |
| Defined benefit pension | 35 | 32 | 8 | 90 | 59 |
| Defined contribution[5] | 36 | 47 | 15 | 14 | 5 |
| Types of plans: |  |  |  |  |  |
| Savings and thrift | 23 | 31 | 7 | 5 | 1 |
| Deferred profit sharing | 10 | 13 | 6 | - | - |
| Employee stock ownership | 2 | 3 | 1 | - | - |
| Money purchase pension | 6 | 6 | 2 | 10 | 4 |

[1] Data for public sector employees are for 1998, data for private sector small establishments (fewer than 100 employees) are for 1996, and data for private sector medium and large establishments are for 1997.

[2] Sick leave is limited to annual benefits. Per disability sick leave plans are now reported along with sickness and accident insurance as short-term disability plans.

[3] Private sector data have been revised since 1999 publication.

[4] Includes defined benefit plans and defined contribution plans. Some employees participated in both types of plans.

[5] Includes other types of defined contribution plans not shown separately. Sums of individual items may not equal totals because employees may be enrolled in more than one type of plan.

NOTE: Dashes indicate no employees in this category.

## Table 44. Full-time employees[1] participating in selected retirement benefit programs by industry sector and size of establishment, 1996-98

(In percent, unless otherwise indicated.)

| Benefit | Civilian workforce | Private sector | | | State and local governments |
|---|---|---|---|---|---|
| | | Total | Small establishments | Medium and large establishments | |
| Total (thousands) | 92,576 | 78,225 | 39,816 | 38,409 | 14,351 |
| All retirement plans[2] | 68 | 62 | 46 | 79 | 98 |
| Defined benefit pension | 41 | 32 | 15 | 50 | 90 |
| Defined contribution | 42 | 47 | 38 | 57 | 14 |
| Savings and thrift | 27 | 31 | 23 | 39 | 5 |
| Deferred profit-sharing | 11 | 13 | 12 | 13 | - |
| Employee stock ownership | 2 | 3 | 1 | 4[3] | - |
| Money purchase pension | 6 | 6 | 4 | 8 | 10 |
| Simplified employee pension | ([4]) | 1 | 1 | - | ([4]) |
| Deferred earnings arrangements: | | | | | |
| With employer contributions | 31[5] | 35 | 24 | 46 | 13 |
| Salary reduction | 29 | 34 | 24 | 44 | 6 |
| Savings and thrift | 25 | 29 | 21 | 38 | 4 |
| Without employer contributions | 9 | 6 | 4 | 9 | 22 |

[1] Small private establishments include those employing less than 100 workers, data are from 1996; medium and large private establishments include those employing 100 workers or more, data are from 1997; and State and local governments, data are from 1998.

[2] Includes defined benefit pension plans and defined contribution retirement plans. Some employees participated in both types of plans.

[3] Private sector data have been revised since 1999 publication.

[4] Less than 0.5 percent.

[5] Includes other deferred earnings arrangements not shown separately.

NOTE: Dash indicates no employees in this category

## Table 45. Percent of employees eligible for selected benefits, full- and part-time, private and public sectors, 1996-98[1]

| Benefit | All employees | Private sector | | Public sector | |
|---|---|---|---|---|---|
| | | Full-time | Part-time | Full-time | Part-time |
| Section 125 cafeteria benefits plans[2] | 34 | 37 | 8 | 55 | 24 |
| Full flexible benefits programs | 7 | 8 | 2 | 5 | 3 |
| Severance pay | 22 | 25 | 5 | 29 | 16 |
| Supplemental unemployment benefits | 2 | 2 | ([3]) | ([3]) | - |
| Employer assistance for child care | 5 | 5 | 4 | 7 | 7 |
| Long-term care insurance | 5 | 4 | 1 | 11 | 15 |
| Wellness programs | 21 | 22 | 10 | 35 | 27 |
| Employee assistance programs | 38 | 37 | 18 | 70 | 43 |
| Job-related travel accident insurance | 21 | 27 | 9 | 12 | 7 |
| Nonproduction bonuses | 37 | 43 | 23 | 33 | 7 |
| Job-related educational assistance | 47 | 52 | 20 | 63 | 39 |
| Non-job-related educational assistance | 12 | 13 | 3 | 22 | 16 |

[1] Data for public sector employees are for 1998, data for private sector small establishments (fewer than 100 employees) are for 1996, and data for private sector medium and large establishments are for 1997.

[2] Includes all plans under Internal Revenue Code Section 125.

[3] Less than 0.5 percent.

NOTE: Dashes indicate no employees in this category.

Table 46. **Precent of employees participating in selected benefits, full-time, by geographical region, 1996-98**[1]

| Benefit | Northeast | South | North Central | West |
|---|---|---|---|---|
| Paid leave: | | | | |
| Holidays | 88 | 82 | 84 | 78 |
| Vacations | 89 | 88 | 87 | 84 |
| Personal leave | 36 | 14 | 22 | 13 |
| Funeral leave | 76 | 61 | 70 | 55 |
| Jury duty leave | 87 | 77 | 79 | 60 |
| Military leave | 45 | 40 | 40 | 30 |
| Family leave | 3 | 2 | 3 | 1 |
| Unpaid leave: | | | | |
| Unpaid family leave | 81 | 72 | 73 | 70 |
| Disability benefits:[2] | | | | |
| Paid-sick leave | 69 | 58 | 55 | 58 |
| Short-term disability | 64 | 30 | 40 | 23 |
| Long-term disability insurance | 30 | 32 | 36 | 33 |
| Survivor benefits: | | | | |
| Life insurance | 77 | 77 | 80 | 69 |
| Accidental death and dismemberment | 56 | 60 | 62 | 52 |
| Survivor income benefits | 1 | 2 | 6 | 2 |
| Health care benefits: | | | | |
| Medical care | 74 | 71 | 74 | 72 |
| Dental care | 52 | 38 | 48 | 56 |
| Vision care | 27 | 15 | 22 | 32 |
| Outpatient prescription drug coverage | 69 | 66 | 70 | 67 |
| Retirement income benefits: | | | | |
| All retirement | 72 | 66 | 68 | 65 |
| Defined benefit | 48 | 37 | 43 | 38 |
| Defined contribution[3] | 42 | 43 | 41 | 42 |
| Savings and thrift | 25 | 28 | 25 | 29 |
| Deferred profit sharing | 10 | 9 | 14 | 11 |
| Employee stock ownership | 2 | 3 | 2 | 3 |
| Money purchase pension | 9 | 6 | 6 | 4 |
| Cash or deferred arrangements: | | | | |
| With employer contributions | 31 | 32 | 31 | 32 |
| Salary reduction[4] | 29 | 29 | 27 | 31 |
| Savings and thrift | 25 | 26 | 23 | 28 |
| Deferral of profit sharing allocation | 1 | 1 | 3 | 1 |
| No employer contributions | 9 | 7 | 10 | 10 |

[1] Data for State and local government employees are from the 1998 survey; data for private sector small establishments (fewer than 100 employees) are from the 1996 survey; and data for private sector medium and large establishments (100 employees or greater) are from the 1997 survey.

[2] Sick leave is limited to annual benefits. Per disability sick leave plans are now reported along with sickness and accident insurance as short-term disability plans.

[3] Includes other types of defined contribution plans not shown separately. Sums of individual items may not equal totals, because employees may be enrolled in more than one type of plan.

[4] Includes other types of salary reduction plans not shown separately.

NOTE: The Northeast region consists of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. The South region consists of Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The North Central region consists of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The West region consists of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Table 47. **Number and percent of full-time employees[1] participating in defined benefit pension plans with selected age and service requirements for normal retirement[2], 1997-98**

| Age and service requirement | Private sector | | State and local governments | |
|---|---|---|---|---|
| | Number (thousands) | Percent | Number (thousands) | Percent |
| Employees with a defined benefit pension plan | 19,202 | 100 | 12,983 | 100 |
| Any age | 889 | 5 | 5,296 | 41 |
| Less than 30 years of service | 3 | (3) | 944 | 7 |
| 30 years of service | 816 | 4 | 3,565 | 27 |
| More than 30 years of service | 70 | (3) | 786 | 6 |
| Age 55 | 1,149 | 6 | 2,630 | 20 |
| Less than 30 years of service | 644 | 3 | 1,358 | 10 |
| 30 years of service | 465 | 2 | 1,243 | 10 |
| More than 30 years of service | 40 | (3) | 28 | (3) |
| Age 60 | 1,741 | 9 | 1,313 | 10 |
| Less than 5 years of service | 559 | 3 | 68 | 1 |
| 5 and less than 10 years of service | 197 | 1 | 786 | 6 |
| 10 and less than 25 years of service | 558 | 3 | 330 | 3 |
| 25 and less than 30 years of service | 94 | (3) | 118 | 1 |
| 30 years of service | 332 | 2 | 10 | (3) |
| More than 30 years of service | - | - | - | - |
| Age 62 | 4,327 | 23 | 472 | 4 |
| Less than 5 years of service | 651 | 3 | 5 | (3) |
| 5 and less than 10 years of service | 676 | 3 | 39 | (3) |
| 10 and less than 25 years of service | 2,730 | 14 | 376 | 3 |
| 25 and less than 30 years of service | 128 | 1 | 10 | (3) |
| 30 years of service | 141 | 1 | 42 | (3) |
| More than 30 years of service | - | - | - | - |
| Age 65 | 9,299 | 48 | 1,229 | 9 |
| Less than 5 years of service | 5,738 | 30 | 467 | 4 |
| 5 and less than 10 years of service | 2,916 | 15 | 324 | 2 |
| 10 years of service | 556 | 3 | 439 | 3 |
| More than 10 years of service | 89 | (3) | - | - |
| Age plus service equals[4] | 1,520 | 8 | 1,718 | 13 |
| Less than 80 | 347 | 2 | 34 | (3) |
| 80 | 230 | 1 | 436 | 3 |
| 81 to 89 | 886 | 5 | 664 | 5 |
| 90 | 57 | (3) | 584 | 4 |
| More than 90 | - | - | - | - |

[1] Data are for private establishments with 100 or more workers, 1997; and State and local governments, 1998.

[2] Normal retirement is defined as the point at which the participant could retire and immediately receive all accrued benefits by virtue of service and earnings, without reduction due to age. If a plan had alternative age and service requirements, the earliest age and associated service were tablulated; if one alternative did not specify an age, it was the requirement tabulated.

[3] Less than 500 employees or less than 0.5 percent.

[4] In some plans, participants must also satisfy a minimum age or service requirement.

NOTE: Dash indicates no employees in this category.

## Table 48. Number and percent distribution of fatal occupational injuries by event or exposure, 1998-99

| Event or exposure[1] | Fatalities | | | |
|---|---|---|---|---|
| | 1998 | | 1999 | |
| | Number | Percent | Number | Percent |
| Total | 6,055 | 100 | 6,023 | 100 |
| **Transportation incidents** | 2,645 | 44 | 2,613 | 43 |
| Highway | 1,442 | 24 | 1,491 | 25 |
| Collision between vehicles, mobile equipment | 707 | 12 | 711 | 12 |
| Moving in same direction | 120 | 2 | 129 | 2 |
| Moving in opposite directions, oncoming | 272 | 4 | 269 | 4 |
| Moving in intersection | 143 | 2 | 160 | 3 |
| Vehicle struck stationary object or equipment | 307 | 5 | 334 | 6 |
| Noncollision | 375 | 6 | 388 | 6 |
| Jack-knifed or overturned--no collision | 302 | 5 | 321 | 5 |
| Nonhighway (farm, industrial premises) | 388 | 6 | 353 | 6 |
| Noncollision accident | 332 | 5 | 306 | 5 |
| Fell from and struck by vehicle, mobile equipment | 70 | 1 | 58 | 1 |
| Overturned | 217 | 4 | 206 | 3 |
| Aircraft | 224 | 4 | 227 | 4 |
| Worker struck by a vehicle | 413 | 7 | 377 | 6 |
| Worker struck by vehicle, mobile equipment in roadway | 131 | 2 | 137 | 2 |
| Worker struck by vehicle, mobile equipment on side of road | 66 | 1 | 65 | 1 |
| Worker struck by vehicle, mobile equipment in parking lot or non-road area | 199 | 3 | 165 | 3 |
| Water vehicle | 112 | 2 | 102 | 2 |
| Railway | 60 | 1 | 56 | 1 |
| Collision between railway vehicle and other vehicle | 48 | 1 | 42 | 1 |
| **Assaults and violent acts** | 962 | 16 | 893 | 15 |
| Homicides | 714 | 12 | 645 | 11 |
| Shooting | 574 | 9 | 506 | 8 |
| Stabbing | 61 | 1 | 60 | 1 |
| Self-inflicted injury | 221 | 4 | 208 | 3 |
| **Contact with objects and equipment** | 944 | 16 | 1,029 | 17 |
| Struck by object | 520 | 9 | 585 | 10 |
| Struck by falling object | 319 | 5 | 358 | 6 |
| Struck by flying object | 59 | 1 | 55 | 1 |
| Struck by rolling, sliding objects on floor or ground level | 75 | 1 | 97 | 2 |
| Caught in or compressed by equipment or objects | 266 | 4 | 302 | 5 |
| Caught in running equipment or machinery | 129 | 2 | 163 | 3 |
| Caught in or crushed in collapsing materials | 140 | 2 | 128 | 2 |
| **Falls** | 706 | 12 | 717 | 12 |
| Fall to lower level | 625 | 10 | 634 | 11 |
| Fall from ladder | 111 | 2 | 96 | 2 |
| Fall from roof | 157 | 3 | 153 | 3 |
| Fall from scaffold, staging | 98 | 2 | 92 | 2 |
| Fall on same level | 51 | 1 | 66 | 1 |
| **Exposure to harmful substances or environments** | 576 | 10 | 529 | 9 |
| Contact with electric current | 334 | 6 | 278 | 5 |
| Contact with electric current of machine, tool, appliance, light fixture | 51 | 1 | 51 | 1 |
| Contact with wiring, transformers, or other electrical component | 84 | 1 | 75 | 1 |
| Contact with overhead power lines | 153 | 3 | 124 | 2 |
| Contact with temperature extremes | 48 | 1 | 50 | 1 |
| Exposure to caustic, noxious, or allergenic substances | 105 | 2 | 106 | 2 |
| Inhalation of substance | 48 | 1 | 55 | 1 |
| Oxygen deficiency | 87 | 1 | 93 | 2 |
| Drowning, submersion | 75 | 1 | 75 | 1 |
| **Fires and explosions** | 206 | 3 | 216 | 4 |
| Fires--unintended or uncontrolled | 117 | 2 | 115 | 2 |
| Explosion | 89 | 1 | 99 | 2 |
| **Other events or exposures**[2] | 16 | ([3]) | 26 | ([3]) |

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[1] Based on the 1992 BLS *Occupational Injury and Illness Classification Manual.*

[2] Includes the category "Bodily reaction and exertion."

[3] Less than 0.5 percent.

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries

Table 49. **Number, percent and rate of fatal occupational injuries for selected occupations, 1998-99**

| Occupation[1] | 1998 | | | 1999 | | |
|---|---|---|---|---|---|---|
| | Number | Percent | Fatality rate per 100,000 workers[2] | Number | Percent | Fatality rate per 100,000 workers[2] |
| Total | 6,055 | 100 | 4.5 | 6,023 | 100 | 4.5 |
| **Managerial and professional specialty** | 642 | 11 | 1.6 | 597 | 10 | 1.5 |
| Executive, administrative, and managerial | 410 | 7 | 2.1 | 371 | 6 | 1.9 |
| Professional specialty | 232 | 4 | 1.2 | 226 | 4 | 1.1 |
| **Technical, sales, and administrative support** | 679 | 11 | 1.8 | 610 | 10 | 1.6 |
| Technicians and related support occupations | 167 | 3 | 3.9 | 158 | 3 | 3.6 |
| Airplane pilots and navigators | 91 | 2 | 80.5 | 94 | 2 | 65.7 |
| Sales occupations | 398 | 7 | 2.5 | 356 | 6 | 2.2 |
| Supervisors and proprietors, sales occupations | 186 | 3 | 3.9 | 140 | 2 | 2.9 |
| Sales workers, retail and personal services | 153 | 3 | 2.2 | 144 | 2 | 2.1 |
| Administrative support occupations, including clerical | 114 | 2 | .6 | 96 | 2 | .5 |
| **Service occupations** | 441 | 7 | 2.4 | 468 | 8 | 2.6 |
| Protective service occupations | 259 | 4 | 10.6 | 261 | 4 | 10.7 |
| Police and detectives, including supervisors | 138 | 2 | 11.6 | 132 | 2 | 11.0 |
| Guards, including supervisors | 76 | 1 | 7.9 | 72 | 1 | 7.5 |
| **Farming, forestry, and fishing** | 930 | 15 | 25.5 | 897 | 15 | 26.2 |
| Farming occupations | 600 | 10 | 28.6 | 557 | 9 | 30.0 |
| Farmers, except horticultural | 281 | 5 | 29.5 | 233 | 4 | 25.9 |
| Managers, farms, except horticultural | 81 | 1 | 45.9 | 118 | 2 | 80.8 |
| Farm workers | 221 | 4 | 23.6 | 199 | 3 | 26.3 |
| Related agricultural occupations | 123 | 2 | 9.6 | 124 | 2 | 9.6 |
| Forestry and logging occupations | 119 | 2 | 129.7 | 122 | 2 | 114.0 |
| Timber cutting and logging occupations | 90 | 1 | 148.3 | 102 | 2 | 154.5 |
| Fishers, hunters, and trappers | 72 | 1 | 134.0 | 78 | 1 | 156.0 |
| Fishers, including vessel captains and officers | 71 | 1 | 137.3 | 78 | 1 | 162.5 |
| **Precision production, craft, and repair** | 1,090 | 18 | 7.5 | 1,142 | 19 | 7.8 |
| Mechanics and repairers | 287 | 5 | 6.0 | 353 | 6 | 7.3 |
| Construction trades | 633 | 10 | 11.3 | 633 | 11 | 10.9 |
| Carpenters and apprentices | 91 | 2 | 6.7 | 103 | 2 | 7.4 |
| Electricians and apprentices | 124 | 2 | 15.4 | 105 | 2 | 12.6 |
| Roofers | 50 | 1 | 20.7 | 59 | 1 | 27.6 |
| Structural metal workers | 52 | 1 | 82.5 | 43 | 1 | 60.6 |
| **Operators, fabricators, and laborers** | 2,155 | 36 | 11.8 | 2,194 | 36 | 12.1 |
| Machine operators, assemblers, and inspectors | 221 | 4 | 2.8 | 216 | 4 | 2.9 |
| Transportation and material moving occupations | 1,260 | 21 | 23.4 | 1,320 | 22 | 23.9 |
| Motor vehicle operators | 1,023 | 17 | 25.1 | 1,063 | 18 | 25.3 |
| Truck drivers | 882 | 15 | 29.2 | 898 | 15 | 28.8 |
| Taxicab drivers and chauffeurs | 82 | 1 | 30.0 | 74 | 1 | 27.3 |
| Material moving equipment operators | 197 | 3 | 17.5 | 205 | 3 | 17.8 |
| Handlers, equipment cleaners, helpers, and laborers | 674 | 11 | 13.2 | 658 | 11 | 12.5 |
| Construction laborers | 335 | 6 | 40.7 | 341 | 6 | 37.1 |
| Laborers, except construction | 193 | 3 | 14.7 | 193 | 3 | 15.0 |
| **Military occupations**[3] | 88 | 1 | 7.2 | 80 | 1 | 6.8 |

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[1] Based on the 1990 Occupational Classification System developed by the Bureau of the Census.

[2] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers based on Current Population Survey and Bureau of the Census figures. Workers under the age of 16 years were not included in the rate calculations so consistency with the CPS employment figures could be maintained.

[3] Resident armed forces.

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries

Table 50. **Number, percent, and rate of fatal occupational injuries by industry, 1998-99**

| Industry[1] | SIC code[1] | 1998 | | | 1999 | | |
|---|---|---|---|---|---|---|---|
| | | Number | Percent | Fatality rate per 100,000 workers[2] | Number | Percent | Fatality rate per 100,000 workers[2] |
| Total | | 6,055 | 100 | 4.5 | 6,023 | 100 | 4.5 |
| **Private Industry** | | 5,457 | 90 | 4.8 | 5,461 | 91 | 4.8 |
| **Agriculture, forestry and fishing** | | 840 | 14 | 23.3 | 807 | 13 | 24.1 |
| Agricultural production - crops | 01 | 380 | 6 | 35.6 | 350 | 6 | 36.6 |
| Agricultural production - livestock | 02 | 174 | 3 | 15.3 | 163 | 3 | 16.4 |
| Agricultural services | 07 | 170 | 3 | 13.3 | 164 | 3 | 12.5 |
| **Mining** | | 147 | 2 | 23.6 | 121 | 2 | 21.5 |
| Oil and gas extraction | 13 | 76 | 1 | 20.4 | 50 | 1 | 15.2 |
| **Construction** | | 1,174 | 19 | 14.5 | 1,190 | 20 | 14.0 |
| General building contractors | 15 | 213 | 4 | - | 183 | 3 | - |
| Heavy construction, except building | 16 | 272 | 4 | - | 280 | 5 | - |
| Special trades contractors | 17 | 680 | 11 | - | 709 | 12 | - |
| **Manufacturing** | | 698 | 12 | 3.3 | 719 | 12 | 3.6 |
| Food and kindred products | 20 | 72 | 1 | 4.3 | 83 | 1 | 5.1 |
| Lumber and wood products | 24 | 172 | 3 | 19.7 | 190 | 3 | 23.1 |
| **Transportation and public utilities** | | 911 | 15 | 11.8 | 1,006 | 17 | 12.7 |
| Local and interurban passenger transportation | 41 | 85 | 1 | 15.4 | 102 | 2 | 17.2 |
| Trucking and warehousing | 42 | 564 | 9 | 21.8 | 605 | 10 | 22.6 |
| Transportation by air | 45 | 74 | 1 | 8.9 | 74 | 1 | 8.6 |
| Electric, gas, and sanitary services | 49 | 83 | 1 | 7.8 | 86 | 1 | 8.4 |
| **Wholesale trade** | | 229 | 4 | 4.5 | 237 | 4 | 4.6 |
| Durable goods | 50 | 138 | 2 | 5.0 | 132 | 2 | 4.7 |
| Nondurable goods | 51 | 91 | 2 | 3.9 | 105 | 2 | 4.5 |
| **Retail trade** | | 570 | 9 | 2.6 | 507 | 8 | 2.3 |
| Food stores | 54 | 135 | 2 | 3.7 | 115 | 2 | 3.3 |
| Automotive dealers and service stations | 55 | 120 | 2 | 5.4 | 82 | 1 | 3.7 |
| Eating and drinking places | 58 | 107 | 2 | 1.6 | 145 | 2 | 2.2 |
| **Finance, insurance, and real estate** | | 92 | 2 | 1.1 | 105 | 2 | 1.2 |
| **Services** | | 763 | 13 | 2.0 | 732 | 12 | 1.9 |
| Automotive repair, services, and parking | 75 | 133 | 2 | 8.6 | 132 | 2 | 8.4 |
| **Government**[3] | | 598 | 10 | 3.0 | 562 | 9 | 2.8 |
| Federal | | 162 | 3 | 3.7 | 147 | 2 | 3.3 |
| State | | 136 | 2 | 2.6 | 108 | 2 | 2.1 |
| Local | | 296 | 5 | 3.0 | 301 | 5 | 2.9 |

[1] Classified according to the *Standard Industrial Classification Manual, 1987.*

[2] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers based on Current Population Survey and Bureau of the Census figures. Workers under the age of 16 years were not included in the rate calculations so consistency with the CPS employment figures could be maintained.

[3] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries

Table 51. **Number, percent, and rate of fatal occupational injures by selected worker characteristics, 1998-99**

| Characteristics | 1998 | | | 1999 | | |
|---|---|---|---|---|---|---|
| | Number | Percent | Fatality rate per 100,000 workers[1] | Number | Percent | Fatality rate per 100,000 workers[1] |
| Total | 6,055 | 100 | 4.5 | 6,023 | 100 | 4.5 |
| **Employee status** | | | | | | |
| Wage and salary workers[2] | 4,804 | 79 | 3.9 | 4,884 | 81 | 3.9 |
| Self-employed[3] | 1,251 | 21 | 11.7 | 1,139 | 19 | 11.1 |
| **Sex** | | | | | | |
| Men | 5,569 | 92 | 7.7 | 5,582 | 93 | 7.7 |
| Women | 486 | 8 | .8 | 441 | 7 | .7 |
| **Age** | | | | | | |
| Under 16 years | 33 | 1 | - | 26 | ( 4 ) | - |
| 16 to 17 years | 32 | 1 | 1.2 | 46 | 1 | 1.6 |
| 18 to 19 years | 137 | 2 | 3.1 | 122 | 2 | 2.7 |
| 20 to 24 years | 421 | 7 | 3.2 | 450 | 7 | 3.4 |
| 25 to 34 years | 1,238 | 20 | 3.9 | 1,171 | 19 | 3.7 |
| 35 to 44 years | 1,525 | 25 | 4.2 | 1,499 | 25 | 4.1 |
| 45 to 54 years | 1,279 | 21 | 4.6 | 1,326 | 22 | 4.6 |
| 55 to 64 years | 836 | 14 | 6.5 | 814 | 14 | 6.1 |
| 65 and over | 541 | 9 | 14.3 | 559 | 9 | 14.4 |
| **Race** | | | | | | |
| White | 5,041 | 83 | 4.5 | 4,990 | 83 | 4.4 |
| Black or African American | 594 | 10 | 4.0 | 626 | 10 | 4.1 |
| American Indian or Alaskan Native | 29 | ( 4 ) | - | 57 | 1 | - |
| Asian, Native Hawaiian or Pacific Islander | 264 | 4 | - | 191 | 3 | - |
| Other or not reported | 127 | 2 | - | 159 | 3 | - |
| **Hispanic origin** | | | | | | |
| Hispanic[5] | 707 | 12 | 5.2 | 725 | 12 | 5.2 |

[1] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers based on Current Population Survey and Bureau of the Census figures. Workers under the age of 16 years were not included in the rate calculations so consistency with the CPS employment figures could be maintained.

[2] May include volunteers and other workers receiving compensation.

[3] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.

[4] Less than 0.5 percent.

[5] Persons identified as Hispanic may be of any race.

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries

## Table 52. **Number of nonfatal occupational injuries and illnesses involving days away from work[1] by selected occupation and industry division, 1999**

(thousands)

| Occupation | Private industry[2] | Goods producing: Agriculture, forestry, and fishing[2] | Goods producing: Mining[3] | Goods producing: Construction | Goods producing: Manufacturing | Service producing: Transportation and public utilities[3] | Service producing: Wholesale trade | Service producing: Retail trade | Service producing: Finance, insurance, and real estate | Service producing: Services |
|---|---|---|---|---|---|---|---|---|---|---|
| Total | 1,702.5 | 34.9 | 11.3 | 193.8 | 403.6 | 196.7 | 136.1 | 291.6 | 39.5 | 394.9 |
| Truck drivers | 141.1 | 1.1 | .8 | 7.3 | 12.1 | 61.9 | 26.2 | 14.6 | .5 | 16.5 |
| Laborers, nonconstruction | 89.1 | .5 | 1.3 | – | 29.0 | 7.1 | 25.7 | 14.2 | .8 | 10.5 |
| Nursing aides, orderlies | 75.7 | – | – | – | – | – | – | – | .4 | 75.3 |
| Construction laborers | 46.5 | – | – | 45.5 | .4 | .3 | – | .1 | .1 | .1 |
| Janitors and cleaners | 43.4 | .4 | (4) | .3 | 6.1 | 1.2 | 1.0 | 5.3 | 4.6 | 24.4 |
| Assemblers | 40.0 | .1 | – | .6 | 34.9 | .7 | 1.8 | 1.1 | – | .8 |
| Carpenters | 35.0 | – | (4) | 27.3 | 3.2 | .3 | .5 | 1.8 | .4 | 1.4 |
| Cooks | 28.0 | – | – | – | .3 | .2 | .1 | 19.2 | .2 | 8.0 |
| Stock handlers and baggers | 27.3 | (4) | (4) | .1 | 1.6 | .3 | 2.4 | 22.7 | – | .2 |
| Registered nurses | 25.7 | – | – | – | (4) | .1 | – | – | .2 | 25.3 |
| Supervisors and proprietors | 25.4 | – | – | .1 | .5 | .1 | 3.2 | 19.5 | .5 | 1.6 |
| Miscellaneous food preparation | 24.9 | – | – | – | .1 | – | .1 | 18.6 | .1 | 5.9 |
| Welders and cutters | 24.7 | (4) | .2 | 1.8 | 18.9 | .7 | 2.3 | – | (4) | .7 |
| Cashiers | 22.8 | .1 | – | – | (4) | .1 | .4 | 20.8 | (4) | 1.4 |
| Sales workers, other commodities | 21.9 | .1 | – | .1 | .3 | .2 | 2.0 | 17.5 | .1 | 1.6 |
| Maids and housemen | 21.4 | – | (4) | – | .1 | (4) | – | – | .7 | 20.5 |
| Groundskeepers and gardeners, except farm | 18.9 | 9.0 | – | .3 | .2 | .2 | .1 | .5 | 2.8 | 5.6 |
| Electricians | 17.9 | – | .3 | 13.6 | 2.2 | .3 | .2 | .2 | .1 | 1.1 |
| Shipping and receiving clerks | 16.6 | – | – | .1 | 5.2 | 3.9 | 3.0 | 3.8 | (4) | .6 |
| Mechanics, automobile | 16.5 | .1 | – | – | .2 | .3 | 1.1 | 10.8 | – | 4.1 |
| Driver-sales workers | 14.5 | – | – | – | 3.6 | .7 | 6.3 | 2.7 | – | 1.2 |
| Kitchen workers | 14.1 | – | – | – | .1 | – | – | 11.4 | – | 2.6 |
| Industrial truck operators | 13.9 | .3 | .5 | .6 | 6.1 | 1.8 | 3.3 | .9 | – | .3 |
| Waiters and waitresses | 13.2 | – | – | – | (4) | (4) | – | 9.4 | .1 | 3.6 |
| Plumbers and pipefitters | 12.4 | – | – | 9.7 | 1.1 | .4 | .3 | – | (4) | .8 |
| Repairers, industrial machinery | 11.9 | – | 1.1 | .1 | 8.9 | .5 | .6 | .2 | – | .5 |
| Licensed practical nurses | 11.7 | – | – | – | – | – | – | – | (4) | 11.6 |
| Mechanics, bus, truck, stationary engine | 11.6 | .1 | (4) | .3 | .7 | 4.8 | 2.3 | 1.3 | – | 2.1 |
| Farm workers | 11.5 | 10.5 | – | – | .4 | – | .4 | – | – | .2 |
| Packaging, filling machine operators | 11.5 | – | – | – | 10.3 | – | .8 | – | – | .3 |
| Stock and inventory clerks | 11.4 | (4) | – | .2 | 2.2 | .6 | 1.2 | 4.8 | .1 | 2.3 |
| Supervisors, production workers | 10.7 | – | .1 | – | 8.2 | .4 | .6 | .5 | .2 | .8 |
| Health aides, except nursing | 10.1 | – | – | – | – | .1 | – | – | – | 9.9 |
| Hand packers and packagers | 9.8 | .3 | – | – | 4.7 | .4 | 2.2 | 1.6 | – | .5 |
| Butchers and meat cutters | 9.8 | .1 | – | – | 2.6 | – | .4 | 6.5 | – | (4) |
| Guards and police, except public | 9.1 | – | (4) | – | .3 | .5 | .1 | .8 | .4 | 7.0 |
| Attendants, public transportation | 9.0 | – | – | – | – | 9.0 | – | – | – | – |
| Heating, air conditioning, and refrigeration mechanics | 8.9 | – | – | 5.8 | .2 | .4 | .7 | .5 | .2 | 1.1 |
| Machinists | 8.7 | – | (4) | .1 | 7.8 | (4) | .3 | – | – | .5 |
| Helpers, construction trades | 8.7 | – | – | 8.3 | .1 | – | .1 | .1 | – | – |

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[1] Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

[2] Excludes farms with fewer than 11 employees.

[3] Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employers in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor, and by the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal industries.

[4] Fewer than 50 cases.

NOTE: Dashes indicate data that are not available. Because of rounding and nonclassifiable responses, dat may not sum to the totals.The n.e.c. abbreviation mean that the category includes those components not elsewher classified.

SOURCE: U.S. Department of Labor, Bureau of Labo Statistics

Table 53. **Percent distribution of nonfatal occupational injuries and illnesses involving days away from work[1] by selected worker characteristics and number of days away from work, 1999**

| Characteristic | Total cases | Percent of days-away-from-work cases involving — | | | | | | | Median days away from work |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 day | 2 days | 3 - 5 days | 6 - 10 days | 11 - 20 days | 21 - 30 days | 31 days or more | |
| Total [1,702,470 cases] | 100.0 | 16.0 | 12.9 | 20.5 | 13.3 | 11.4 | 6.3 | 19.6 | 6 |
| **Sex:** | | | | | | | | | |
| Male | 100.0 | 16.1 | 12.6 | 20.2 | 13.5 | 11.5 | 6.5 | 19.6 | 6 |
| Female | 100.0 | 16.0 | 13.4 | 21.2 | 12.9 | 11.0 | 6.0 | 19.6 | 5 |
| **Age:**[2] | | | | | | | | | |
| 14 - 15 | 100.0 | 51.4 | 4.6 | 14.8 | 6.8 | 6.6 | 1.3 | 14.5 | 1 |
| 16 - 19 | 100.0 | 23.5 | 16.7 | 23.2 | 14.5 | 10.3 | 4.5 | 7.2 | 3 |
| 20 - 24 | 100.0 | 21.2 | 15.2 | 24.8 | 13.3 | 10.4 | 4.8 | 10.3 | 4 |
| 25 - 34 | 100.0 | 17.4 | 14.3 | 21.9 | 13.3 | 11.0 | 5.7 | 16.5 | 5 |
| 35 - 44 | 100.0 | 15.2 | 12.1 | 19.8 | 13.6 | 11.5 | 6.6 | 21.3 | 6 |
| 45 - 54 | 100.0 | 13.1 | 10.9 | 18.6 | 13.3 | 11.9 | 7.1 | 25.0 | 8 |
| 55 - 64 | 100.0 | 11.7 | 10.0 | 16.4 | 12.6 | 12.9 | 7.5 | 28.9 | 10 |
| 65 and over | 100.0 | 11.1 | 10.5 | 15.6 | 11.8 | 14.8 | 9.2 | 26.9 | 11 |
| **Occupation:** | | | | | | | | | |
| Managerial and professional specialty | 100.0 | 16.7 | 15.9 | 22.3 | 13.3 | 11.5 | 4.7 | 15.5 | 5 |
| Technical, sales, and administrative support | 100.0 | 16.4 | 13.4 | 21.6 | 12.1 | 11.4 | 6.2 | 18.8 | 5 |
| Service | 100.0 | 16.0 | 13.9 | 23.2 | 14.1 | 10.7 | 5.1 | 17.0 | 5 |
| Farming, forestry, and fishing | 100.0 | 13.5 | 12.9 | 21.1 | 13.5 | 10.3 | 7.9 | 20.8 | 6 |
| Precision production, craft, and repair | 100.0 | 15.9 | 11.7 | 18.7 | 13.2 | 11.4 | 6.9 | 22.2 | 7 |
| Operators, fabricators, and laborers | 100.0 | 16.0 | 12.4 | 19.5 | 13.4 | 11.6 | 6.7 | 20.4 | 6 |
| **Length of service with employer:** | | | | | | | | | |
| Less than 3 months | 100.0 | 17.9 | 14.5 | 22.0 | 13.0 | 10.8 | 5.4 | 16.5 | 5 |
| 3 - 11 months | 100.0 | 17.0 | 14.0 | 22.5 | 13.7 | 10.5 | 5.2 | 17.0 | 5 |
| 1 - 5 years | 100.0 | 16.6 | 13.1 | 20.6 | 13.2 | 10.8 | 6.2 | 19.3 | 5 |
| More than 5 years | 100.0 | 14.1 | 11.3 | 18.4 | 13.0 | 12.7 | 7.6 | 22.9 | 8 |
| **Race or ethnic origin:** | | | | | | | | | |
| White, non-Hispanic | 100.0 | 16.7 | 13.3 | 20.5 | 13.2 | 11.2 | 6.2 | 18.8 | 5 |
| Black, non-Hispanic | 100.0 | 15.4 | 12.7 | 21.5 | 13.5 | 11.1 | 6.0 | 19.8 | 6 |
| Hispanic | 100.0 | 14.1 | 11.8 | 20.2 | 13.0 | 12.0 | 7.0 | 21.8 | 7 |
| Asian or Pacific Islander | 100.0 | 13.0 | 12.9 | 23.1 | 13.8 | 11.7 | 6.6 | 19.0 | 6 |
| American Indian or Alaskan Native | 100.0 | 15.4 | 10.5 | 28.7 | 15.5 | 10.3 | 4.1 | 15.4 | 5 |

[1] Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

[2] Information is not shown separately for injured workers under age 14; they accounted for fewer than 50 cases.

NOTE: Because of rounding and nonclassifiable responses, percentages may not add to 100.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics

### Table 54. **Incidence rates and number of cases of nonfatal occupational injuries and illnesses for private industry by selected case types, 1973-99**

| Year[1] | Incidence rate[2] |  |  |  | Number (in thousands) |  |  |  |
|---|---|---|---|---|---|---|---|---|
|  | Total cases | Lost workday cases |  | Cases without lost workdays | Total cases | Lost workday cases |  | Cases without lost workdays |
|  |  | Total[3] | With days away from work[4] |  |  | Total[3] | With days away from work[4] |  |
| 1973 | 11.0 | 3.4 | – | 7.5 | 6,078.7 | 1,908.0 | – | 4,165.0 |
| 1974 | 10.4 | 3.5 | – | 6.9 | 5,915.8 | 2,001.8 | – | 3,908.1 |
| 1975 | 9.1 | 3.3 | 3.2 | 5.8 | 4,983.1 | 1,825.2 | 1,730.5 | 3,152.6 |
| 1976 | 9.2 | 3.5 | 3.3 | 5.7 | 5,163.7 | 1,978.8 | 1,875.4 | 3,180.4 |
| 1977 | 9.3 | 3.8 | 3.6 | 5.5 | 5,460.3 | 2,203.6 | 2,092.1 | 3,250.6 |
| 1978[5] | 9.4 | 4.1 | 3.8 | 5.3 | 5,799.4 | 2,492.0 | 2,327.5 | 3,302.0 |
| 1979[5] | 9.5 | 4.3 | 4.0 | 5.2 | 6,105.7 | 2,757.7 | 2,553.5 | 3,342.3 |
| 1980 | 8.7 | 4.0 | 3.7 | 4.7 | 5,605.8 | 2,539.9 | 2,353.8 | 3,060.4 |
| 1981 | 8.3 | 3.8 | 3.5 | 4.5 | 5,404.4 | 2,457.5 | 2,269.2 | 2,941.8 |
| 1982 | 7.7 | 3.5 | 3.2 | 4.2 | 4,856.4 | 2,182.4 | 2,016.2 | 2,668.6 |
| 1983[5] | 7.6 | 3.4 | 3.2 | 4.2 | 4,854.1 | 2,182.7 | 2,014.2 | 2,667.6 |
| 1984[5] | 8.0 | 3.7 | 3.4 | 4.3 | 5,419.7 | 2,501.5 | 2,303.7 | 2,913.4 |
| 1985 | 7.9 | 3.6 | 3.3 | 4.3 | 5,507.2 | 2,537.0 | 2,319.2 | 2,965.9 |
| 1986 | 7.9 | 3.6 | 3.3 | 4.3 | 5,629.0 | 2,590.3 | 2,356.9 | 3,034.6 |
| 1987 | 8.3 | 3.8 | 3.4 | 4.4 | 6,035.9 | 2,801.6 | 2,483.9 | 3,230.6 |
| 1988 | 8.6 | 4.0 | 3.5 | 4.6 | 6,440.4 | 2,977.8 | 2,483.9 | 3,458.7 |
| 1989 | 8.6 | 4.0 | 3.4 | 4.6 | 6,576.3 | 3,073.9 | 2,624.2 | 3,497.9 |
| 1990 | 8.8 | 4.1 | 3.4 | 4.7 | 6,753.0 | 3,123.8 | 2,613.5 | 3,625.6 |
| 1991 | 8.4 | 3.9 | 3.2 | 4.5 | 6,345.7 | 2,944.2 | 2,398.4 | 3,398.3 |
| 1992[6] | 8.9 | 3.9 | 3.0 | 5.0 | 6,799.4 | 2,953.4 | 2,331.1 | 3,846.0 |
| 1993[6] | 8.5 | 3.8 | 2.9 | 4.8 | 6,737.4 | 2,967.4 | 2,252.5 | 3,770.0 |
| 1994[6] | 8.4 | 3.8 | 2.8 | 4.6 | 6,766.9 | 3,061.0 | 2,236.6 | 3,705.9 |
| 1995[6] | 8.1 | 3.6 | 2.5 | 4.4 | 6,575.4 | 2,972.1 | 2,040.9 | 3,603.2 |
| 1996[6] | 7.4 | 3.4 | 2.2 | 4.1 | 6,238.9 | 2,832.5 | 1,880.6 | 3,406.4 |
| 1997[6] | 7.1 | 3.3 | 2.1 | 3.8 | 6,145.6 | 2,866.2 | 1,833.4 | 3,279.4 |
| 1998[6] | 6.7 | 3.1 | 2.0 | 3.5 | 5,922.8 | 2,780.7 | 1,730.5 | 3,142.1 |
| 1999[6] | 6.3 | 3.0 | 1.9 | 3.3 | 5,707.2 | 2,742.8 | 1,702.5 | 2,964.5 |

[1] Data for 1973-75 are based on the *Standard Industrial Classification Manual*, 1967 Edition; data for 1976-87 are based on the *Standard Industrial Classification Manual*, 1972 Edition; and data for 1988-99 are based on the *Standard Industrial Classification Manual*, 1987 Edition. The recordkeeping guidelines for occupational injuries and illnesses were revised in 1986, and the Survey of Occupational Injuries and Illnesses was redesigned in 1992.

[2] The incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000, where

| | | |
|---|---|---|
| N | = | number of injuries and illnesses |
| EH | = | total hours worked by all employees during the calendar year |
| 200,000 | = | base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year) |

[3] Total lost workday cases involve days away from work, days of restricted work activity, or both.

[4] Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

[5] To maintain historical comparability with the rest of the series, data for small nonfarm employers in low-risk industries who were not surveyed were imputed and included in the survey estimates.

[6] Data exclude fatal work-related injuries and illnesses.

NOTE: Because of rounding, components may not add to the totals. Data for 1976-99 exclude farms with fewer than 11 employees.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics

## Table 55. **Unemployment for selected demographic groups, annual averages, 1948-2000**

(In thousands)

| Year | Total unemployed | Men | | | Women | | | White | Black | Married men, spouse present | Women who maintain families |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | 16 to 19 years | 20 years and over | Total | 16 to 19 years | 20 years and over | | | | |
| 1948 | 2,276 | 1,559 | 256 | 1,305 | 717 | 153 | 564 | – | – | – | – |
| 1949 | 3,637 | 2,572 | 353 | 2,219 | 1,065 | 223 | 841 | – | – | – | – |
| 1950 | 3,288 | 2,239 | 318 | 1,922 | 1,049 | 195 | 854 | – | – | – | – |
| 1951 | 2,055 | 1,221 | 191 | 1,029 | 834 | 145 | 689 | – | – | – | – |
| 1952 | 1,883 | 1,185 | 205 | 980 | 698 | 140 | 559 | – | – | – | – |
| 1953[1] | 1,834 | 1,202 | 184 | 1,019 | 632 | 123 | 510 | – | – | – | – |
| 1954 | 3,532 | 2,344 | 310 | 2,035 | 1,188 | 191 | 997 | 2,859 | – | – | – |
| 1955 | 2,852 | 1,854 | 274 | 1,580 | 998 | 176 | 823 | 2,252 | – | 972 | – |
| 1956 | 2,750 | 1,711 | 269 | 1,442 | 1,039 | 209 | 832 | 2,159 | – | 905 | – |
| 1957 | 2,859 | 1,841 | 300 | 1,541 | 1,018 | 197 | 821 | 2,289 | – | 982 | – |
| 1958 | 4,602 | 3,098 | 416 | 2,681 | 1,504 | 262 | 1,242 | 3,680 | – | 1,799 | – |
| 1959 | 3,740 | 2,420 | 398 | 2,022 | 1,320 | 256 | 1,063 | 2,946 | – | 1,296 | – |
| 1960[1] | 3,852 | 2,486 | 426 | 2,060 | 1,366 | 286 | 1,080 | 3,065 | – | 1,334 | – |
| 1961 | 4,714 | 2,997 | 479 | 2,518 | 1,717 | 349 | 1,368 | 3,743 | – | 1,676 | – |
| 1962[1] | 3,911 | 2,423 | 408 | 2,016 | 1,488 | 313 | 1,175 | 3,052 | – | 1,300 | – |
| 1963 | 4,070 | 2,472 | 501 | 1,971 | 1,598 | 383 | 1,216 | 3,208 | – | 1,235 | – |
| 1964 | 3,786 | 2,205 | 487 | 1,718 | 1,581 | 385 | 1,195 | 2,999 | – | 1,039 | – |
| 1965 | 3,366 | 1,914 | 479 | 1,435 | 1,452 | 395 | 1,056 | 2,691 | – | 883 | – |
| 1966 | 2,875 | 1,551 | 432 | 1,120 | 1,324 | 405 | 921 | 2,255 | – | 706 | – |
| 1967 | 2,975 | 1,508 | 448 | 1,060 | 1,468 | 391 | 1,078 | 2,338 | – | 685 | 70 |
| 1968 | 2,817 | 1,419 | 426 | 993 | 1,397 | 412 | 985 | 2,226 | – | 620 | 124 |
| 1969 | 2,832 | 1,403 | 440 | 963 | 1,429 | 413 | 1,015 | 2,260 | – | 582 | 130 |
| 1970 | 4,093 | 2,238 | 599 | 1,638 | 1,855 | 506 | 1,349 | 3,339 | – | 1,002 | 161 |
| 1971 | 5,016 | 2,789 | 693 | 2,097 | 2,227 | 568 | 1,658 | 4,085 | – | 1,255 | 236 |
| 1972[1] | 4,882 | 2,659 | 711 | 1,948 | 2,222 | 598 | 1,625 | 3,906 | 906 | 1,100 | 245 |
| 1973[1] | 4,365 | 2,275 | 653 | 1,624 | 2,089 | 583 | 1,507 | 3,442 | 846 | 916 | 249 |
| 1974 | 5,156 | 2,714 | 757 | 1,957 | 2,441 | 665 | 1,777 | 4,097 | 965 | 1,087 | 266 |
| 1975 | 7,929 | 4,442 | 966 | 3,476 | 3,486 | 802 | 2,684 | 6,421 | 1,369 | 2,063 | 401 |
| 1976 | 7,406 | 4,036 | 939 | 3,098 | 3,369 | 780 | 2,588 | 5,914 | 1,334 | 1,709 | 428 |
| 1977 | 6,991 | 3,667 | 874 | 2,794 | 3,324 | 789 | 2,535 | 5,441 | 1,393 | 1,462 | 422 |
| 1978[1] | 6,202 | 3,142 | 813 | 2,328 | 3,061 | 769 | 2,292 | 4,698 | 1,330 | 1,135 | 417 |
| 1979 | 6,137 | 3,120 | 811 | 2,308 | 3,018 | 743 | 2,276 | 4,664 | 1,319 | 1,134 | 425 |
| 1980 | 7,637 | 4,267 | 913 | 3,353 | 3,370 | 755 | 2,615 | 5,884 | 1,553 | 1,709 | 482 |
| 1981 | 8,273 | 4,577 | 962 | 3,615 | 3,696 | 800 | 2,895 | 6,343 | 1,731 | 1,766 | 579 |
| 1982 | 10,678 | 6,179 | 1,090 | 5,089 | 4,499 | 886 | 3,613 | 8,241 | 2,142 | 2,632 | 675 |
| 1983 | 10,717 | 6,260 | 1,003 | 5,257 | 4,457 | 825 | 3,632 | 8,128 | 2,272 | 2,634 | 706 |
| 1984 | 8,539 | 4,744 | 812 | 3,932 | 3,794 | 687 | 3,107 | 6,372 | 1,914 | 1,896 | 627 |
| 1985 | 8,312 | 4,521 | 806 | 3,715 | 3,791 | 661 | 3,129 | 6,191 | 1,864 | 1,767 | 651 |
| 1986[1] | 8,237 | 4,530 | 779 | 3,751 | 3,707 | 675 | 3,032 | 6,140 | 1,840 | 1,819 | 632 |
| 1987 | 7,425 | 4,101 | 732 | 3,369 | 3,324 | 616 | 2,709 | 5,501 | 1,684 | 1,625 | 613 |
| 1988 | 6,701 | 3,655 | 667 | 2,987 | 3,046 | 558 | 2,487 | 4,944 | 1,547 | 1,360 | 547 |
| 1989 | 6,528 | 3,525 | 658 | 2,867 | 3,003 | 536 | 2,467 | 4,770 | 1,544 | 1,276 | 558 |
| 1990[1] | 7,047 | 3,906 | 667 | 3,239 | 3,140 | 544 | 2,596 | 5,186 | 1,565 | 1,446 | 580 |
| 1991 | 8,628 | 4,946 | 751 | 4,195 | 3,683 | 608 | 3,074 | 6,560 | 1,723 | 1,875 | 663 |
| 1992 | 9,613 | 5,523 | 806 | 4,717 | 4,090 | 621 | 3,469 | 7,169 | 2,011 | 2,150 | 737 |
| 1993 | 8,940 | 5,055 | 768 | 4,287 | 3,885 | 597 | 3,288 | 6,655 | 1,844 | 1,899 | 731 |
| 1994[1] | 7,996 | 4,367 | 740 | 3,627 | 3,629 | 580 | 3,049 | 5,892 | 1,666 | 1,592 | 692 |
| 1995 | 7,404 | 3,983 | 744 | 3,239 | 3,421 | 602 | 2,819 | 5,459 | 1,538 | 1,424 | 624 |
| 1996 | 7,236 | 3,880 | 733 | 3,146 | 3,356 | 573 | 2,783 | 5,300 | 1,592 | 1,322 | 658 |
| 1997[1] | 6,739 | 3,577 | 694 | 2,882 | 3,162 | 577 | 2,585 | 4,836 | 1,560 | 1,167 | 684 |
| 1998[1] | 6,210 | 3,266 | 686 | 2,580 | 2,944 | 519 | 2,424 | 4,484 | 1,426 | 1,034 | 612 |
| 1999[1] | 5,880 | 3,066 | 633 | 2,433 | 2,814 | 529 | 2,285 | 4,273 | 1,309 | 990 | 560 |
| 2000[1] | 5,655 | 2,954 | 604 | 2,350 | 2,701 | 489 | 2,212 | 4,099 | 1,269 | 891 | 522 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Dash indicates data not available.

## Table 56. **Unemployment rates for selected demographic groups, annual averages, 1948-2000**

(Percent)

| Year | Total, all workers | Men | | | Women | | | White | Black | Married men, spouse present | Women who maintain families |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | 16 to 19 years | 20 years and over | Total | 16 to 19 years | 20 years and over | | | | |
| 1948 | 3.8 | 3.6 | 9.8 | 3.2 | 4.1 | 8.3 | 3.6 | – | – | – | – |
| 1949 | 5.9 | 5.9 | 14.3 | 5.4 | 6.0 | 12.3 | 5.3 | – | – | – | – |
| 1950 | 5.3 | 5.1 | 12.7 | 4.7 | 5.7 | 11.4 | 5.1 | – | – | – | – |
| 1951 | 3.3 | 2.8 | 8.1 | 2.5 | 4.4 | 8.3 | 4.0 | – | – | – | – |
| 1952 | 3.0 | 2.8 | 8.9 | 2.4 | 3.6 | 8.0 | 3.2 | – | – | – | – |
| 1953[1] | 2.9 | 2.8 | 7.9 | 2.5 | 3.3 | 7.2 | 2.9 | – | – | – | – |
| 1954 | 5.5 | 5.3 | 13.5 | 4.9 | 6.0 | 11.4 | 5.5 | 5.0 | – | – | – |
| 1955 | 4.4 | 4.2 | 11.6 | 3.8 | 4.9 | 10.2 | 4.4 | 3.9 | – | 2.6 | – |
| 1956 | 4.1 | 3.8 | 11.1 | 3.4 | 4.8 | 11.2 | 4.2 | 3.6 | – | 2.3 | – |
| 1957 | 4.3 | 4.1 | 12.4 | 3.6 | 4.7 | 10.6 | 4.1 | 3.8 | – | 2.8 | – |
| 1958 | 6.8 | 6.8 | 17.1 | 6.2 | 6.8 | 14.3 | 6.1 | 6.1 | – | 5.1 | – |
| 1959 | 5.5 | 5.2 | 15.3 | 4.7 | 5.9 | 13.5 | 5.2 | 4.8 | – | 3.6 | – |
| 1960[1] | 5.5 | 5.4 | 15.3 | 4.7 | 5.9 | 13.9 | 5.1 | 5.0 | – | 3.7 | – |
| 1961 | 6.7 | 6.4 | 17.1 | 5.7 | 7.2 | 16.3 | 6.3 | 6.0 | – | 4.6 | – |
| 1962[1] | 5.5 | 5.2 | 14.7 | 4.6 | 6.2 | 14.6 | 5.4 | 4.9 | – | 3.6 | – |
| 1963 | 5.7 | 5.2 | 17.2 | 4.5 | 6.5 | 17.2 | 5.4 | 5.0 | – | 3.4 | – |
| 1964 | 5.2 | 4.6 | 15.8 | 3.9 | 6.2 | 16.6 | 5.2 | 4.6 | – | 2.8 | – |
| 1965 | 4.5 | 4.0 | 14.1 | 3.2 | 5.5 | 15.7 | 4.5 | 4.1 | – | 2.4 | – |
| 1966 | 3.8 | 3.2 | 11.7 | 2.5 | 4.8 | 14.1 | 3.8 | 3.4 | – | 1.9 | – |
| 1967 | 3.8 | 3.1 | 12.3 | 2.3 | 5.2 | 13.5 | 4.2 | 3.4 | – | 1.8 | 4.9 |
| 1968 | 3.6 | 2.9 | 11.6 | 2.2 | 4.8 | 14.0 | 3.8 | 3.2 | – | 1.6 | 4.4 |
| 1969 | 3.5 | 2.8 | 11.4 | 2.1 | 4.7 | 13.3 | 3.7 | 3.1 | – | 1.5 | 4.4 |
| 1970 | 4.9 | 4.4 | 15.0 | 3.5 | 5.9 | 15.6 | 4.8 | 4.5 | – | 2.6 | 5.4 |
| 1971 | 5.9 | 5.3 | 16.6 | 4.4 | 6.9 | 17.2 | 5.7 | 5.4 | – | 3.2 | 7.3 |
| 1972[1] | 5.6 | 5.0 | 15.9 | 4.0 | 6.6 | 16.7 | 5.4 | 5.1 | 10.4 | 2.8 | 7.2 |
| 1973[1] | 4.9 | 4.2 | 13.9 | 3.3 | 6.0 | 15.3 | 4.9 | 4.3 | 9.4 | 2.3 | 7.1 |
| 1974 | 5.6 | 4.9 | 15.6 | 3.8 | 6.7 | 16.6 | 5.5 | 5.0 | 10.5 | 2.7 | 7.0 |
| 1975 | 8.5 | 7.9 | 20.1 | 6.8 | 9.3 | 19.7 | 8.0 | 7.8 | 14.8 | 5.1 | 10.0 |
| 1976 | 7.7 | 7.1 | 19.2 | 5.9 | 8.6 | 18.7 | 7.4 | 7.0 | 14.0 | 4.2 | 10.1 |
| 1977 | 7.1 | 6.3 | 17.3 | 5.2 | 8.2 | 18.3 | 7.0 | 6.2 | 14.0 | 3.6 | 9.4 |
| 1978[1] | 6.1 | 5.3 | 15.8 | 4.3 | 7.2 | 17.1 | 6.0 | 5.2 | 12.8 | 2.8 | 8.5 |
| 1979 | 5.8 | 5.1 | 15.9 | 4.2 | 6.8 | 16.4 | 5.7 | 5.1 | 12.3 | 2.8 | 8.3 |
| 1980 | 7.1 | 6.9 | 18.3 | 5.9 | 7.4 | 17.2 | 6.4 | 6.3 | 14.3 | 4.2 | 9.2 |
| 1981 | 7.6 | 7.4 | 20.1 | 6.3 | 7.9 | 19.0 | 6.8 | 6.7 | 15.6 | 4.3 | 10.4 |
| 1982 | 9.7 | 9.9 | 24.4 | 8.8 | 9.4 | 21.9 | 8.3 | 8.6 | 18.9 | 6.5 | 11.7 |
| 1983 | 9.6 | 9.9 | 23.3 | 8.9 | 9.2 | 21.3 | 8.1 | 8.4 | 19.5 | 6.5 | 12.2 |
| 1984 | 7.5 | 7.4 | 19.6 | 6.6 | 7.6 | 18.0 | 6.8 | 6.5 | 15.9 | 4.6 | 10.3 |
| 1985 | 7.2 | 7.0 | 19.5 | 6.2 | 7.4 | 17.6 | 6.6 | 6.2 | 15.1 | 4.3 | 10.4 |
| 1986[1] | 7.0 | 6.9 | 19.0 | 6.1 | 7.1 | 17.6 | 6.2 | 6.0 | 14.5 | 4.4 | 9.8 |
| 1987 | 6.2 | 6.2 | 17.8 | 5.4 | 6.2 | 15.9 | 5.4 | 5.3 | 13.0 | 3.9 | 9.2 |
| 1988 | 5.5 | 5.5 | 16.0 | 4.8 | 5.6 | 14.4 | 4.9 | 4.7 | 11.7 | 3.3 | 8.1 |
| 1989 | 5.3 | 5.2 | 15.9 | 4.5 | 5.4 | 14.0 | 4.7 | 4.5 | 11.4 | 3.0 | 8.1 |
| 1990[1] | 5.6 | 5.7 | 16.3 | 5.0 | 5.5 | 14.7 | 4.9 | 4.8 | 11.4 | 3.4 | 8.3 |
| 1991 | 6.8 | 7.2 | 19.8 | 6.4 | 6.4 | 17.5 | 5.7 | 6.1 | 12.5 | 4.4 | 9.3 |
| 1992 | 7.5 | 7.9 | 21.5 | 7.1 | 7.0 | 18.6 | 6.3 | 6.6 | 14.2 | 5.1 | 10.0 |
| 1993 | 6.9 | 7.2 | 20.4 | 6.4 | 6.6 | 17.5 | 5.9 | 6.1 | 13.0 | 4.4 | 9.7 |
| 1994[1] | 6.1 | 6.2 | 19.0 | 5.4 | 6.0 | 16.2 | 5.4 | 5.3 | 11.5 | 3.7 | 8.9 |
| 1995 | 5.6 | 5.6 | 18.4 | 4.8 | 5.6 | 16.1 | 4.9 | 4.9 | 10.4 | 3.3 | 8.0 |
| 1996 | 5.4 | 5.4 | 18.1 | 4.6 | 5.4 | 15.2 | 4.8 | 4.7 | 10.5 | 3.0 | 8.2 |
| 1997[1] | 4.9 | 4.9 | 16.9 | 4.2 | 5.0 | 15.0 | 4.4 | 4.2 | 10.0 | 2.7 | 8.1 |
| 1998[1] | 4.5 | 4.4 | 16.2 | 3.7 | 4.6 | 12.9 | 4.1 | 3.9 | 8.9 | 2.4 | 7.2 |
| 1999[1] | 4.2 | 4.1 | 14.7 | 3.5 | 4.3 | 13.2 | 3.8 | 3.7 | 8.0 | 2.2 | 6.4 |
| 2000[1] | 4.0 | 3.9 | 14.0 | 3.3 | 4.1 | 12.1 | 3.6 | 3.5 | 7.6 | 2.0 | 5.9 |

[1] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Dash indicates data not available.

Table 57. **Unemployed persons by duration and reason, annual averages, 1948-2000**

(Numbers in thousands)

| Year | Total unem-ployed | Duration of unemployment | | | | | | Reason for unemployment | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Less than 5 weeks | 5 to14 weeks | 15 to 26 weeks | 27 weeks and over | Mean dura-tion (weeks) | Median dura-tion (weeks) | Job losers[1] | Job leavers | Reen-trants | New entrants |
| 1948 | 2,276 | 1,300 | 669 | 193 | 116 | 8.6 | – | – | – | – | – |
| 1949 | 3,637 | 1,756 | 1,194 | 428 | 256 | 10.0 | – | – | – | – | – |
| 1950 | 3,288 | 1,450 | 1,055 | 425 | 357 | 12.1 | – | – | – | – | – |
| 1951 | 2,055 | 1,177 | 574 | 166 | 137 | 9.7 | – | – | – | – | – |
| 1952 | 1,883 | 1,135 | 516 | 148 | 84 | 8.4 | – | – | – | – | – |
| 1953[2] | 1,834 | 1,142 | 482 | 132 | 78 | 8.0 | – | – | – | – | – |
| 1954 | 3,532 | 1,605 | 1,116 | 495 | 317 | 11.8 | – | – | – | – | – |
| 1955 | 2,852 | 1,335 | 815 | 366 | 336 | 13.0 | – | – | – | – | – |
| 1956 | 2,750 | 1,412 | 805 | 301 | 232 | 11.3 | – | – | – | – | – |
| 1957 | 2,859 | 1,408 | 891 | 321 | 239 | 10.5 | – | – | – | – | – |
| 1958 | 4,602 | 1,753 | 1,396 | 785 | 667 | 13.9 | – | – | – | – | – |
| 1959 | 3,740 | 1,585 | 1,114 | 469 | 571 | 14.4 | – | – | – | – | – |
| 1960[2] | 3,852 | 1,719 | 1,176 | 503 | 454 | 12.8 | – | – | – | – | – |
| 1961 | 4,714 | 1,806 | 1,376 | 728 | 804 | 15.6 | – | – | – | – | – |
| 1962[2] | 3,911 | 1,663 | 1,134 | 534 | 585 | 14.7 | – | – | – | – | – |
| 1963 | 4,070 | 1,751 | 1,231 | 535 | 553 | 14.0 | – | – | – | – | – |
| 1964 | 3,786 | 1,697 | 1,117 | 491 | 482 | 13.3 | – | – | – | – | – |
| 1965 | 3,366 | 1,628 | 983 | 404 | 351 | 11.8 | – | – | – | – | – |
| 1966 | 2,875 | 1,573 | 779 | 287 | 239 | 10.4 | – | – | – | – | – |
| 1967 | 2,975 | 1,634 | 893 | 271 | 177 | 8.7 | 2.3 | 1,229 | 438 | 945 | 396 |
| 1968 | 2,817 | 1,594 | 810 | 256 | 156 | 8.4 | 4.5 | 1,070 | 431 | 909 | 407 |
| 1969 | 2,832 | 1,629 | 827 | 242 | 133 | 7.8 | 4.4 | 1,017 | 436 | 965 | 413 |
| 1970 | 4,093 | 2,139 | 1,290 | 428 | 235 | 8.6 | 4.9 | 1,811 | 550 | 1,228 | 504 |
| 1971 | 5,016 | 2,245 | 1,585 | 668 | 519 | 11.3 | 6.3 | 2,323 | 590 | 1,472 | 630 |
| 1972[2] | 4,882 | 2,242 | 1,472 | 601 | 566 | 12.0 | 6.2 | 2,108 | 641 | 1,456 | 677 |
| 1973[2] | 4,365 | 2,224 | 1,314 | 483 | 343 | 10.0 | 5.2 | 1,694 | 683 | 1,340 | 649 |
| 1974 | 5,156 | 2,604 | 1,597 | 574 | 381 | 9.8 | 5.2 | 2,242 | 768 | 1,463 | 681 |
| 1975 | 7,929 | 2,940 | 2,484 | 1,303 | 1,203 | 14.2 | 8.4 | 4,386 | 827 | 1,892 | 823 |
| 1976 | 7,406 | 2,844 | 2,196 | 1,018 | 1,348 | 15.8 | 8.2 | 3,679 | 903 | 1,928 | 895 |
| 1977 | 6,991 | 2,919 | 2,132 | 913 | 1,028 | 14.3 | 7.0 | 3,166 | 909 | 1,963 | 953 |
| 1978[2] | 6,202 | 2,865 | 1,923 | 766 | 648 | 11.9 | 5.9 | 2,585 | 874 | 1,857 | 885 |
| 1979 | 6,137 | 2,950 | 1,946 | 706 | 535 | 10.8 | 5.4 | 2,635 | 880 | 1,806 | 817 |
| 1980 | 7,637 | 3,295 | 2,470 | 1,052 | 820 | 11.9 | 6.5 | 3,947 | 891 | 1,927 | 872 |
| 1981 | 8,273 | 3,449 | 2,539 | 1,122 | 1,162 | 13.7 | 6.9 | 4,267 | 923 | 2,102 | 981 |
| 1982 | 10,678 | 3,883 | 3,311 | 1,708 | 1,776 | 15.6 | 8.7 | 6,268 | 840 | 2,384 | 1,185 |
| 1983 | 10,717 | 3,570 | 2,937 | 1,652 | 2,559 | 20.0 | 10.1 | 6,258 | 830 | 2,412 | 1,216 |
| 1984 | 8,539 | 3,350 | 2,451 | 1,104 | 1,634 | 18.2 | 7.9 | 4,421 | 823 | 2,184 | 1,110 |
| 1985 | 8,312 | 3,498 | 2,509 | 1,025 | 1,280 | 15.6 | 6.8 | 4,139 | 877 | 2,256 | 1,039 |
| 1986[2] | 8,237 | 3,448 | 2,557 | 1,045 | 1,187 | 15.0 | 6.9 | 4,033 | 1,015 | 2,160 | 1,029 |
| 1987 | 7,425 | 3,246 | 2,196 | 943 | 1,040 | 14.5 | 6.5 | 3,566 | 965 | 1,974 | 920 |
| 1988 | 6,701 | 3,084 | 2,007 | 801 | 809 | 13.5 | 5.9 | 3,092 | 983 | 1,809 | 816 |
| 1989 | 6,528 | 3,174 | 1,978 | 730 | 646 | 11.9 | 4.8 | 2,983 | 1,024 | 1,843 | 677 |
| 1990[2] | 7,047 | 3,265 | 2,257 | 822 | 703 | 12.0 | 5.3 | 3,387 | 1,041 | 1,930 | 688 |
| 1991 | 8,628 | 3,480 | 2,791 | 1,246 | 1,111 | 13.7 | 6.8 | 4,694 | 1,004 | 2,139 | 792 |
| 1992 | 9,613 | 3,376 | 2,830 | 1,453 | 1,954 | 17.7 | 8.7 | 5,389 | 1,002 | 2,285 | 937 |
| 1993 | 8,940 | 3,262 | 2,584 | 1,297 | 1,798 | 18.0 | 8.3 | 4,848 | 976 | 2,198 | 919 |
| 1994[2] | 7,996 | 2,728 | 2,408 | 1,237 | 1,623 | 18.8 | 9.2 | 3,815 | 791 | 2,786 | 604 |
| 1995 | 7,404 | 2,700 | 2,342 | 1,085 | 1,278 | 16.6 | 8.3 | 3,476 | 824 | 2,525 | 579 |
| 1996 | 7,236 | 2,633 | 2,287 | 1,053 | 1,262 | 16.7 | 8.3 | 3,370 | 774 | 2,512 | 580 |
| 1997[2] | 6,739 | 2,538 | 2,138 | 995 | 1,067 | 15.8 | 8.0 | 3,037 | 795 | 2,338 | 569 |
| 1998[2] | 6,210 | 2,622 | 1,950 | 763 | 875 | 14.5 | 6.7 | 2,822 | 734 | 2,132 | 520 |
| 1999[2] | 5,880 | 2,568 | 1,832 | 755 | 725 | 13.4 | 6.4 | 2,622 | 783 | 2,005 | 469 |
| 2000[2] | 5,655 | 2,543 | 1,803 | 665 | 644 | 12.6 | 5.9 | 2,492 | 775 | 1,957 | 431 |

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[1] Beginning January 1994 includes persons who completed temporary jobs.

[2] The comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Dash indicates data not available.

## Table 58. Unemployment rates of persons 25 to 64 years of age by educational attainment and sex, March 1970-2000

(Percent)

| Year | Less than 4 years of high school | 4 years of high school, only | College: 1 to 3 years | College: 4 years or more |
|---|---|---|---|---|
| **TOTAL** | | | | |
| 1970 | 4.6 | 2.9 | 2.9 | 1.3 |
| 1971 | 6.4 | 4.0 | 3.7 | 2.0 |
| 1972[1] | 5.8 | 3.9 | 3.5 | 2.0 |
| 1973[1] | 5.4 | 3.3 | 2.9 | 1.7 |
| 1974 | 5.3 | 3.4 | 3.4 | 1.7 |
| 1975 | 10.7 | 6.9 | 5.5 | 2.5 |
| 1976 | 8.6 | 6.1 | 5.2 | 2.4 |
| 1977 | 9.0 | 5.6 | 5.0 | 2.8 |
| 1978[1] | 7.4 | 4.5 | 3.3 | 2.2 |
| 1979 | 7.2 | 4.4 | 3.5 | 2.1 |
| 1980 | 8.4 | 5.1 | 4.3 | 1.9 |
| 1981 | 10.1 | 6.2 | 4.5 | 2.2 |
| 1982 | 12.5 | 8.5 | 6.4 | 3.0 |
| 1983 | 15.8 | 10.0 | 7.3 | 3.5 |
| 1984 | 12.1 | 7.2 | 5.3 | 2.7 |
| 1985 | 11.4 | 6.9 | 4.7 | 2.4 |
| 1986[1] | 11.6 | 6.9 | 4.7 | 2.3 |
| 1987 | 11.1 | 6.3 | 4.5 | 2.3 |
| 1988 | 9.4 | 5.4 | 3.7 | 1.7 |
| 1989 | 8.9 | 4.8 | 3.4 | 2.2 |
| 1990[1] | 9.6 | 4.9 | 3.7 | 1.9 |
| 1991 | 12.3 | 6.7 | 5.0 | 2.9 |
| 1992[1] | 13.5 | 7.7 | 5.9 | 2.9 |
| 1993 | 13.0 | 7.3 | 5.5 | 3.2 |
| 1994[1] | 12.6 | 6.7 | 5.0 | 2.9 |
| 1995 | 10.0 | 5.2 | 4.5 | 2.5 |
| 1996 | 10.9 | 5.5 | 4.1 | 2.2 |
| 1997[1] | 10.4 | 5.1 | 3.8 | 2.0 |
| 1998[1] | 8.5 | 4.8 | 3.6 | 1.8 |
| 1999[1] | 7.7 | 4.0 | 3.1 | 1.9 |
| 2000[1] | 7.9 | 3.8 | 3.0 | 1.5 |
| **Men** | | | | |
| 1970 | 4.0 | 2.4 | 2.7 | 1.1 |
| 1971 | 6.0 | 3.6 | 3.5 | 1.8 |
| 1972[1] | 5.4 | 3.6 | 3.1 | 1.9 |
| 1973[1] | 5.0 | 2.8 | 2.8 | 1.6 |
| 1974 | 4.7 | 3.1 | 2.9 | 1.5 |
| 1975 | 10.5 | 6.7 | 5.1 | 2.2 |
| 1976 | 8.3 | 5.8 | 5.1 | 2.2 |
| 1977 | 8.6 | 5.1 | 4.5 | 2.4 |
| 1978[1] | 7.1 | 4.2 | 3.1 | 1.9 |
| 1979 | 6.6 | 4.2 | 3.2 | 1.7 |
| 1980 | 8.2 | 5.3 | 4.4 | 1.7 |
| 1981 | 10.2 | 6.6 | 4.4 | 1.9 |
| 1982 | 12.7 | 9.3 | 6.8 | 2.9 |
| 1983 | 16.1 | 11.9 | 8.4 | 3.4 |
| 1984 | 12.3 | 8.1 | 5.2 | 2.7 |
| 1985 | 11.2 | 7.2 | 4.5 | 2.4 |
| 1986[1] | 11.7 | 7.4 | 4.7 | 2.3 |
| 1987 | 11.2 | 6.7 | 5.0 | 2.5 |
| 1988 | 10.0 | 6.2 | 3.9 | 1.6 |
| 1989 | 9.4 | 5.4 | 3.2 | 2.3 |

See footnote at end of table.

## Table 58. Unemployment rates of persons 25 to 64 years of age by educational attainment and sex, March 1970-2000—Continued

(Percent)

| Year | Less than 4 years of high school | 4 years of high school, only | College | |
|---|---|---|---|---|
| | | | 1 to 3 years | 4 years or more |
| **Men—Continued** | | | | |
| 1990[1] | 9.6 | 5.3 | 3.9 | 2.1 |
| 1991 | 13.4 | 7.7 | 5.2 | 3.2 |
| 1992 | 14.8 | 8.8 | 6.4 | 3.2 |
| 1993 | 14.1 | 8.7 | 6.3 | 3.4 |
| 1994[1] | 12.8 | 7.2 | 5.3 | 2.9 |
| 1995 | 10.9 | 5.7 | 4.4 | 2.6 |
| 1996[1] | 11.0 | 6.4 | 4.5 | 2.3 |
| 1997[1] | 9.9 | 5.6 | 4.0 | 2.1 |
| 1998[1] | 8.0 | 5.1 | 3.7 | 1.7 |
| 1999[1] | 7.0 | 4.1 | 3.2 | 1.9 |
| 2000[1] | 7.1 | 3.9 | 3.1 | 1.6 |
| **Women** | | | | |
| 1970 | 5.7 | 3.6 | 3.1 | 1.9 |
| 1971 | 7.2 | 4.5 | 4.3 | 2.4 |
| 1972[1] | 6.6 | 4.3 | 4.2 | 2.3 |
| 1973[1] | 6.2 | 3.9 | 3.0 | 2.1 |
| 1974 | 6.4 | 3.8 | 4.4 | 2.1 |
| 1975 | 10.5 | 7.1 | 6.3 | 3.4 |
| 1976 | 9.2 | 6.5 | 5.5 | 2.7 |
| 1977 | 9.7 | 6.2 | 5.7 | 3.6 |
| 1978[1] | 7.9 | 4.9 | 3.6 | 2.6 |
| 1979 | 8.3 | 4.7 | 3.8 | 2.8 |
| 1980 | 8.9 | 5.0 | 4.1 | 2.2 |
| 1981 | 10.0 | 5.8 | 4.6 | 2.7 |
| 1982 | 12.2 | 7.8 | 5.3 | 3.3 |
| 1983 | 15.3 | 8.0 | 6.0 | 3.7 |
| 1984 | 11.7 | 6.3 | 5.3 | 2.7 |
| 1985 | 11.7 | 6.5 | 4.8 | 2.5 |
| 1986[1] | 11.4 | 6.3 | 4.8 | 2.4 |
| 1987 | 10.9 | 5.8 | 4.0 | 2.1 |
| 1988 | 8.5 | 4.6 | 3.4 | 1.9 |
| 1989 | 8.1 | 4.2 | 3.7 | 2.0 |
| 1990[1] | 9.5 | 4.6 | 3.5 | 1.7 |
| 1991 | 10.7 | 5.5 | 4.8 | 2.5 |
| 1992[1] | 11.4 | 6.5 | 5.3 | 2.5 |
| 1993 | 11.2 | 5.8 | 4.6 | 2.9 |
| 1994[1] | 12.4 | 6.2 | 4.7 | 2.9 |
| 1995 | 8.6 | 4.6 | 4.5 | 2.4 |
| 1996 | 10.7 | 4.4 | 3.8 | 2.1 |
| 1997[1] | 11.3 | 4.5 | 3.6 | 2.0 |
| 1998[1] | 9.3 | 4.4 | 3.5 | 1.9 |
| 1999[1] | 8.8 | 3.9 | 3.0 | 1.9 |
| 2000[1] | 9.1 | 3.6 | 2.9 | 1.4 |

[1] Data on educational attainment, beginning in 1992, reflect degrees or diplomas received rather than years of school completed and are not strictly comparable with data for prior years. In addition, the comparability of historical labor force data has been affected at various times by methodological and conceptual changes. For an explanation, see the Explanatory Notes and Estimates of Error section of *Employment and Earnings*, a monthly periodical published by the Bureau of Labor Statistics.

Table 59. **Civilian unemployment rates, approximating U.S. concepts, 10 countries, 1959-2000**

| Year | United States | Canada | Australia | Japan | France | Germany (1) | Italy | Nether-lands | Sweden | United Kingdom |
|---|---|---|---|---|---|---|---|---|---|---|
| 1959 .......... | 5.5 | 5.6 | [2]2.1 | 2.3 | 1.6 | 2.0 | 4.8 | – | [3]1.7 | 2.8 |
| 1960 .......... | 5.5 | 6.5 | [2]1.6 | 1.7 | 1.5 | 1.1 | 3.7 | – | [3]1.7 | 2.2 |
| 1961 .......... | 6.7 | 6.7 | [2]3.0 | 1.5 | 1.2 | .6 | 3.2 | – | 1.5 | 2.0 |
| 1962 .......... | 5.5 | 5.5 | [2]2.9 | 1.3 | 1.4 | .6 | 2.8 | – | 1.5 | 2.7 |
| 1963 .......... | 5.7 | 5.2 | [2]2.3 | 1.3 | 1.6 | .5 | 2.4 | – | 1.7 | 3.3 |
| 1964 .......... | 5.2 | 4.4 | 1.4 | 1.2 | 1.2 | .4 | 2.7 | – | 1.6 | 2.5 |
| 1965 .......... | 4.5 | 3.6 | 1.3 | 1.2 | 1.6 | .3 | 3.5 | – | 1.2 | 2.1 |
| 1966 .......... | 3.8 | 3.4 | 1.6 | 1.4 | 1.6 | .3 | 3.7 | – | 1.6 | 2.3 |
| 1967 .......... | 3.8 | 3.8 | 1.9 | 1.3 | 2.1 | 1.3 | 3.4 | – | 2.1 | 3.3 |
| 1968 .......... | 3.6 | 4.5 | 1.8 | 1.2 | 2.7 | 1.1 | 3.5 | – | 2.2 | 3.2 |
| 1969 .......... | 3.5 | 4.4 | 1.8 | 1.1 | 2.3 | .6 | 3.5 | – | 1.9 | 3.1 |
| 1970 .......... | 4.9 | 5.7 | 1.6 | 1.2 | 2.5 | .5 | 3.2 | – | 1.5 | 3.1 |
| 1971 .......... | 5.9 | 6.2 | 1.9 | 1.3 | 2.8 | .6 | 3.3 | – | 2.6 | 3.9 |
| 1972 .......... | 5.6 | 6.2 | 2.6 | 1.4 | 2.9 | .7 | 3.8 | – | 2.7 | 4.2 |
| 1973 .......... | 4.9 | 5.5 | 2.3 | 1.3 | 2.8 | .7 | 3.7 | 3.1 | 2.5 | 3.2 |
| 1974 .......... | 5.6 | 5.3 | 2.7 | 1.4 | 2.9 | 1.6 | 3.1 | 3.6 | 2.0 | 3.1 |
| 1975 .......... | 8.5 | 6.9 | 4.9 | 1.9 | 4.2 | 3.4 | 3.4 | 5.1 | 1.6 | 4.6 |
| 1976 .......... | 7.7 | [4]6.8 | 4.8 | 2.0 | 4.6 | 3.4 | 3.9 | 5.4 | 1.6 | 5.9 |
| 1977 .......... | 7.1 | 7.8 | 5.6 | 2.0 | 5.2 | 3.4 | 4.1 | 4.9 | 1.8 | 6.4 |
| 1978 .......... | 6.1 | 8.1 | 6.3 | 2.3 | 5.4 | 3.3 | 4.1 | 5.1 | 2.2 | 6.3 |
| 1979 .......... | 5.8 | 7.2 | 6.3 | 2.1 | 6.1 | 2.9 | 4.4 | 5.1 | 2.1 | 5.4 |
| 1980 .......... | 7.1 | 7.2 | 6.1 | 2.0 | 6.5 | 2.8 | 4.4 | 6.0 | 2.0 | 7.0 |
| 1981 .......... | 7.6 | 7.3 | 5.8 | 2.2 | 7.6 | 4.0 | 4.9 | 8.9 | 2.5 | 10.5 |
| 1982 .......... | 9.7 | 10.6 | 7.2 | 2.4 | 8.3 | 5.6 | 5.4 | 10.2 | 3.1 | 11.3 |
| 1983 .......... | 9.6 | 11.5 | 10.0 | 2.7 | 8.6 | [4]6.9 | 5.9 | [4]11.4 | 3.5 | 11.8 |
| 1984 .......... | 7.5 | 10.9 | 9.0 | 2.8 | 10.0 | 7.1 | 5.9 | 11.5 | 3.1 | 11.7 |
| 1985 .......... | 7.2 | 10.2 | 8.3 | 2.6 | 10.5 | 7.2 | 6.0 | 9.6 | 2.8 | 11.2 |
| 1986 .......... | 7.0 | 9.2 | 8.1 | 2.8 | 10.6 | 6.6 | [4]7.5 | 10.0 | 2.6 | 11.2 |
| 1987 .......... | 6.2 | 8.4 | 8.1 | 2.9 | 10.8 | 6.3 | 7.9 | 10.0 | [4]2.2 | 10.3 |
| 1988 .......... | 5.5 | 7.3 | 7.2 | 2.5 | 10.3 | 6.3 | 7.9 | [4]7.7 | 1.9 | 8.6 |
| 1989 .......... | 5.3 | 7.0 | 6.2 | 2.3 | 9.6 | 5.7 | 7.8 | 7.0 | 1.6 | 7.2 |
| 1990 .......... | [4]5.6 | 7.7 | 6.9 | 2.1 | 9.1 | 5.0 | 7.0 | 6.2 | 1.8 | 6.9 |
| 1991 .......... | 6.8 | 9.8 | 9.6 | 2.1 | 9.6 | [4]5.6 | [4]6.9 | 5.9 | 3.1 | 8.8 |
| 1992 .......... | 7.5 | 10.6 | 10.8 | 2.2 | [4]10.4 | 6.7 | 7.3 | 5.6 | 5.6 | 10.1 |
| 1993 .......... | 6.9 | 10.7 | 10.9 | 2.5 | 11.8 | 7.9 | [4]10.2 | 6.5 | 9.3 | 10.5 |
| 1994 .......... | [4]6.1 | 9.4 | 9.7 | 2.9 | 12.3 | 8.5 | 11.2 | 7.2 | 9.6 | 9.7 |
| 1995 .......... | 5.6 | 8.5 | 8.5 | 3.2 | 11.8 | 8.2 | 11.8 | 7.1 | 9.1 | 8.7 |
| 1996 .......... | 5.4 | 8.7 | 8.6 | 3.4 | 12.5 | 8.9 | 11.7 | 6.3 | 9.9 | 8.2 |
| 1997 .......... | 4.9 | 8.2 | 8.6 | 3.4 | 12.4 | 9.9 | 11.9 | 5.3 | 10.1 | 7.0 |
| 1998 .......... | 4.5 | 7.5 | 8.0 | 4.1 | 11.8 | 9.3 | 12.0 | 4.0 | 8.4 | 6.3 |
| 1999 .......... | 4.2 | 6.8 | 7.2 | 4.7 | 11.2 | 8.7 | 11.5 | 3.4 | 7.1 | 6.1p |
| 2000 .......... | 4.0 | 5.8 | 6.6 | 4.8 | 9.7p | 8.3p | 10.7p | – | 5.8 | 5.5p |

[1] Former West Germany through 1990, unified Germany thereafter.

[2] The Australian labor force survey was initiated in 1964. Unemployment rates for 1959-63 are estimates made by an Australian researcher.

[3] The Swedish labor force survey was initiated in 1961. The figures for 1959-60 are estimates made by the Organization for Economic Cooperation and Development.

[4] There are breaks in the series for the United States (1990, 1994), Canada (1976), France (1992), Germany (1983, 1991), Italy (1986, 1991, 1993), the Netherlands (1983, 1988), and Sweden (1987):

The United States (1990): The impact was to raise the unemployment rate by 0.1 percentage point.

The United States (1994): The impact was to raise the unemployment rate by 0.1 percentage point.

Canada (1976): Beginning with 1976, the unemployment rates are adjusted to more closely approximate U.S. concepts. The impact was to lower the unemployment rate 0.4 percentage point in 1976.

France (1992): The impact was to lower the unemployment rate by 0.1 percentage point.

Germany (1983): The impact was to lower the unemployment rate by 0.3 percentage point.

Germany (1991): The impact of including the former East Germany was to increase the 1991 unemployment rate 1.3 percentage points.

Italy (1986): The impact was to raise the unemployment rate by 1.2 percentage points.

Italy (1991): The impact was to raise the unemployment rate by approximately 0.3 percentage point.

Italy (1993): The impact was to raise the unemployment rate by approximately 1.1 percentage points.

Netherlands (1983): The impact was to lower the unemployment rate by about 2 percentage points.

Netherlands (1988): The impact was to lower the unemployment rate by 1.7 percentage points.

Sweden (1987): The net impact of the break and the BLS adjustment for students seeking work lowered the unemployment rate by 0.1 percentage point.

p = preliminary.

Dash indicates data not available.

Table 60. **Consumer price indexes, 16 countries, 1950-2000**

(Indexes: 1982-84=100)

| Year | United States<br>I[1] | Canada<br>I[2] | Japan<br>I[3] | Australia<br>I[4] | Austria<br>I | Belgium<br>I[5] | Denmark<br>I[6] | France<br>I[7] |
|---|---|---|---|---|---|---|---|---|
| 1950 | 24.1 | 21.6 | 14.8 | 12.6 | - | 24.0 | 12.3 | 11.1 |
| 1955 | 26.8 | 24.4 | 20.2 | 18.9 | - | 26.8 | 15.0 | 14.5 |
| 1960 | 29.6 | 26.9 | 21.8 | 22.1 | 32.6 | 29.1 | 16.7 | 19.4 |
| 1961 | 29.9 | 27.1 | 23.0 | 22.6 | 33.8 | 29.3 | 17.4 | 20.0 |
| 1962 | 30.2 | 27.4 | 24.6 | 22.6 | 35.3 | 29.8 | 18.8 | 21.0 |
| 1963 | 30.6 | 27.9 | 26.4 | 22.7 | 36.2 | 30.4 | 19.8 | 22.0 |
| 1964 | 31.0 | 28.4 | 27.4 | 23.2 | 37.6 | 31.7 | 20.5 | 22.7 |
| 1965 | 31.5 | 29.1 | 29.5 | 24.1 | 39.5 | 32.9 | 21.8 | 23.3 |
| 1966 | 32.4 | 30.2 | 31.0 | 24.9 | 40.3 | 34.3 | 23.3 | 23.9 |
| 1967 | 33.4 | 31.3 | 32.3 | 25.7 | 41.9 | 35.3 | 25.0 | 24.6 |
| 1968 | 34.8 | 32.5 | 34.0 | 26.3 | 43.1 | 36.3 | 27.0 | 25.7 |
| 1969 | 36.7 | 34.0 | 35.8 | 27.1 | 44.4 | 37.6 | 27.9 | 27.3 |
| 1970 | 38.8 | 35.1 | 38.5 | 28.2 | 46.4 | 39.1 | 29.8 | 28.8 |
| 1971 | 40.5 | 36.2 | 40.9 | 29.9 | 48.5 | 40.8 | 31.5 | 30.3 |
| 1972 | 41.8 | 37.9 | 42.9 | 31.6 | 51.6 | 43.0 | 33.6 | 32.2 |
| 1973 | 44.4 | 40.7 | 47.9 | 34.6 | 55.5 | 46.0 | 36.7 | 34.6 |
| 1974 | 49.3 | 45.2 | 59.1 | 39.9 | 60.8 | 51.9 | 42.3 | 39.3 |
| 1975 | 53.8 | 50.1 | 66.0 | 45.9 | 65.9 | 58.5 | 46.4 | 43.9 |
| 1976 | 56.9 | 53.8 | 72.2 | 52.1 | 70.8 | 63.8 | 50.5 | 48.2 |
| 1977 | 60.6 | 58.1 | 78.1 | 58.5 | 74.6 | 68.4 | 56.1 | 52.7 |
| 1978 | 65.2 | 63.3 | 81.4 | 63.1 | 77.3 | 71.4 | 61.8 | 57.5 |
| 1979 | 72.6 | 69.1 | 84.4 | 68.8 | 80.2 | 74.6 | 67.7 | 63.6 |
| 1980 | 82.4 | 76.1 | 90.9 | 75.8 | 85.3 | 79.6 | 76.1 | 72.3 |
| 1981 | 90.9 | 85.6 | 95.4 | 83.2 | 91.1 | 85.6 | 85.0 | 82.0 |
| 1982 | 96.5 | 94.9 | 98.0 | 92.4 | 96.0 | 93.1 | 93.6 | 91.6 |
| 1983 | 99.6 | 100.4 | 99.8 | 101.8 | 99.2 | 100.3 | 100.0 | 100.5 |
| 1984 | 103.9 | 104.7 | 102.1 | 105.8 | 104.8 | 106.6 | 106.4 | 107.9 |
| 1985 | 107.6 | 108.9 | 104.2 | 112.9 | 108.2 | 111.8 | 111.4 | 114.2 |
| 1986 | 109.6 | 113.4 | 104.8 | 123.2 | 110.0 | 113.3 | 115.4 | 117.2 |
| 1987 | 113.6 | 118.4 | 104.9 | 133.7 | 111.6 | 115.0 | 120.0 | 120.9 |
| 1988 | 118.3 | 123.2 | 105.7 | 142.9 | 113.8 | 116.4 | 125.5 | 124.2 |
| 1989 | 124.0 | 129.3 | 108.1 | 154.1 | 116.6 | 120.0 | 131.5 | 128.6 |
| 1990 | 130.7 | 135.5 | 111.4 | 165.3 | 120.5 | 124.1 | 135.0 | 133.0 |
| 1991 | 136.2 | 143.1 | 115.1 | 170.7 | 124.4 | 128.1 | 138.2 | 137.2 |
| 1992 | 140.3 | 145.3 | 117.0 | 172.4 | 129.5 | 131.2 | 141.1 | 140.6 |
| 1993 | 144.5 | 147.9 | 118.5 | 175.5 | 134.1 | 134.8 | 142.9 | 143.5 |
| 1994 | 148.2 | 148.2 | 119.3 | 178.8 | 138.2 | 138.0 | 145.8 | 145.9 |
| 1995 | 152.4 | 151.4 | 119.2 | 187.1 | 141.3 | 140.1 | 148.8 | 148.4 |
| 1996 | 156.9 | 153.8 | 119.3 | 192.0 | 143.9 | 142.9 | 151.9 | 151.3 |
| 1997 | 160.5 | 156.2 | 121.5 | 192.5 | 145.8 | 145.3 | 155.3 | 153.2 |
| 1998 | 163.0 | 157.7 | 122.2 | 194.1 | 147.1 | 146.7 | 158.2 | 154.3 |
| 1999 | 166.6 | 160.5 | 121.8 | 197.0 | 147.9 | 148.3 | 162.0 | 155.0 |
| 2000 | 172.2 | 164.8 | 121.0 | 205.8 | 151.4 | 152.1 | 166.8 | 157.7 |

See footnotes at end of table.

## Table 60. **Consumer price indexes, 16 countries, 1950-2000—Continued**

(Indexes: 1982-84=100)

| Year | Unified Germany I | West Germany I[8] | Italy I[9] | Netherlands I[10] | Norway I[11] | Spain II[12] | Sweden I | Switzerland I[13] | United Kingdom I[14] |
|---|---|---|---|---|---|---|---|---|---|
| 1950 |  | 33.9 | 8.9 | 21.2 | 13.6 | 5.5 | 13.4 | 33.2 | 9.8 |
| 1955 |  | 37.3 | 10.9 | 24.9 | 18.4 | 6.3 | 17.5 | 36.0 | 12.9 |
| 1960 |  | 40.9 | 11.9 | 28.3 | 21.1 | 9.1 | 21.0 | 38.2 | 14.6 |
| 1961 |  | 41.9 | 12.2 | 28.6 | 21.6 | 9.2 | 21.5 | 38.9 | 15.1 |
| 1962 |  | 43.1 | 12.7 | 29.3 | 22.8 | 9.7 | 22.5 | 40.6 | 15.8 |
| 1963 |  | 44.4 | 13.7 | 30.3 | 23.4 | 10.6 | 23.2 | 42.0 | 16.1 |
| 1964 |  | 45.4 | 14.5 | 32.0 | 24.7 | 11.3 | 23.9 | 43.3 | 16.6 |
| 1965 |  | 46.9 | 15.2 | 33.3 | 25.7 | 12.8 | 25.1 | 44.8 | 17.4 |
| 1966 |  | 48.6 | 15.5 | 35.2 | 26.6 | 13.6 | 26.8 | 46.9 | 18.1 |
| 1967 |  | 49.4 | 16.1 | 36.4 | 27.8 | 14.5 | 27.9 | 48.8 | 18.5 |
| 1968 |  | 50.2 | 16.3 | 37.8 | 28.7 | 15.2 | 28.4 | 50.0 | 19.4 |
| 1969 |  | 51.1 | 16.7 | 40.6 | 29.6 | 15.5 | 29.2 | 51.3 | 20.5 |
| 1970 |  | 52.8 | 17.5 | 42.1 | 32.8 | 16.4 | 31.3 | 53.1 | 21.8 |
| 1971 |  | 55.6 | 18.4 | 45.3 | 34.8 | 17.7 | 33.6 | 56.6 | 23.8 |
| 1972 |  | 58.7 | 19.4 | 48.9 | 37.3 | 19.2 | 35.6 | 60.4 | 25.5 |
| 1973 |  | 62.8 | 21.6 | 52.9 | 40.1 | 21.4 | 38.0 | 65.7 | 27.9 |
| 1974 |  | 67.2 | 25.7 | 58.1 | 43.8 | 24.8 | 41.7 | 72.1 | 32.3 |
| 1975 |  | 71.2 | 30.0 | 63.8 | 49.0 | 29.0 | 45.8 | 76.9 | 40.1 |
| 1976 |  | 74.2 | 35.1 | 69.6 | 53.5 | 34.1 | 50.5 | 78.2 | 46.8 |
| 1977 |  | 77.0 | 41.0 | 74.1 | 58.3 | 42.4 | 56.3 | 79.2 | 54.2 |
| 1978 |  | 79.0 | 46.0 | 77.2 | 63.1 | 50.8 | 61.9 | 80.1 | 58.7 |
| 1979 |  | 82.3 | 52.8 | 80.5 | 66.1 | 58.8 | 66.4 | 83.0 | 66.6 |
| 1980 |  | 86.7 | 64.0 | 86.1 | 73.3 | 67.9 | 75.5 | 86.3 | 78.5 |
| 1981 |  | 92.2 | 75.4 | 91.9 | 83.3 | 77.8 | 84.6 | 91.9 | 87.9 |
| 1982 |  | 97.1 | 87.8 | 97.2 | 92.7 | 89.0 | 91.9 | 97.1 | 95.4 |
| 1983 |  | 100.3 | 100.7 | 99.8 | 100.5 | 99.9 | 100.0 | 100.0 | 99.8 |
| 1984 |  | 102.7 | 111.5 | 103.0 | 106.8 | 111.1 | 108.1 | 102.9 | 104.8 |
| 1985 |  | 104.8 | 121.8 | 105.3 | 112.9 | 120.9 | 116.0 | 106.4 | 111.1 |
| 1986 |  | 104.7 | 129.0 | 105.6 | 121.0 | 131.5 | 121.0 | 107.2 | 114.9 |
| 1987 |  | 104.9 | 135.1 | 105.1 | 131.6 | 138.5 | 126.1 | 108.8 | 119.7 |
| 1988 |  | 106.3 | 141.9 | 106.1 | 140.4 | 145.1 | 133.4 | 110.8 | 125.6 |
| 1989 |  | 109.2 | 150.8 | 107.1 | 146.8 | 155.0 | 142.0 | 114.3 | 135.4 |
| 1990 |  | 112.1 | 160.5 | 109.9 | 152.8 | 165.4 | 156.7 | 120.5 | 148.2 |
| 1991 | 100.0 | 116.2 | 170.6 | 113.3 | 158.0 | 175.2 | 171.5 | 127.5 | 156.9 |
| 1992 | 105.1 | 120.9 | 179.4 | 116.9 | 161.7 | 185.6 | 175.6 | 132.7 | 162.7 |
| 1993 | 109.8 | 125.2 | 187.5 | 120.0 | 165.4 | 194.1 | 183.9 | 137.0 | 165.3 |
| 1994 | 112.8 | 128.6 | 195.0 | 123.3 | 167.7 | 203.3 | 187.8 | 138.3 | 169.3 |
| 1995 | 114.7 | 130.7 | 205.1 | 125.7 | 171.8 | 212.8 | 192.4 | 140.8 | 175.2 |
| 1996 | 116.3 | 132.4 | 213.4 | 128.2 | 174.0 | 220.3 | 193.5 | 141.9 | 179.4 |
| 1997 | 118.5 | 134.8 | 217.7 | 131.0 | 178.5 | 224.8 | 194.8 | 142.5 | 185.1 |
| 1998 | 119.7 | 136.0 | 222.0 | 133.6 | 182.5 | 228.8 | 194.2 | 142.7 | 191.4 |
| 1999 | 120.3 | 136.9 | 225.7 | 136.5 | 186.7 | 234.2 | 195.1 | 143.8 | 194.3 |
| 2000 | 122.6 | 139.7 | 231.4 | 140.0 | 192.5 | 242.1 | 196.9 | 146.0 | 200.1 |

I = All Households Index, II = Worker Households Index.

[1] All urban households from 1978; urban worker households prior to 1978.

[2] All households from January 1995; all urban households from September 1978 to December 1994; and middle income urban households prior to September 1978.

[3] Excluding agricultural and single person households.

[4] Urban worker households prior to September 1998.

[5] Excluding rent and several other services prior to 1976.

[6] Excluding rent prior to 1964.

[7] All households from 1991; urban worker households from 1962 to 1990; worker households in Paris only prior to 1962.

[8] Refers to the former West Germany. Middle income worker households prior to 1962.

[9] Middle income worker households prior to 1953.

[10] Middle income worker households prior to 1969.

[11] Urban worker households prior to 1960.

[12] Middle income worker households.

[13] Urban worker households prior to May 1993.

[14] Excluding pensioner and high income households.

Table 61. **Hourly compensation costs in U.S. dollars for production workers in manufacturing, 29 countries or areas, 1975-99**

| Year | United States | Canada | Mexico | Australia[1] | Hong Kong SAR[2] | Israel | Japan | Korea | New Zealand | Singa-pore |
|---|---|---|---|---|---|---|---|---|---|---|
| 1975 .......... | $6.36 | $5.96 | $1.47 | $5.62 | $0.76 | $2.25 | $3.00 | $0.32 | $3.15 | $0.84 |
| 1976 .......... | 6.92 | 7.06 | 1.64 | 6.22 | .87 | 2.38 | 3.25 | .42 | 2.94 | .86 |
| 1977 .......... | 7.59 | 7.34 | 1.34 | 6.29 | 1.03 | 2.68 | 3.96 | .56 | 3.30 | .91 |
| 1978 .......... | 8.28 | 7.42 | 1.62 | 7.00 | 1.18 | 2.57 | 5.45 | .76 | 4.06 | 1.05 |
| 1979 .......... | 9.04 | 7.87 | 1.91 | 7.47 | 1.31 | 3.30 | 5.40 | 1.01 | 4.62 | 1.26 |
| 1980 .......... | 9.87 | 8.67 | 2.21 | 8.47 | 1.51 | 3.79 | 5.52 | .96 | 5.22 | 1.49 |
| 1981 .......... | 10.87 | 9.57 | 2.82 | 9.80 | 1.55 | 4.18 | 6.08 | 1.02 | 5.59 | 1.80 |
| 1982 .......... | 11.68 | 10.45 | 1.97 | 9.98 | 1.66 | 4.43 | 5.60 | 1.09 | 5.51 | 1.96 |
| 1983 .......... | 12.14 | 11.16 | 1.42 | 9.31 | 1.51 | 4.88 | 6.03 | 1.15 | 5.09 | 2.21 |
| 1984 .......... | 12.55 | 11.15 | 1.56 | 9.83 | 1.58 | 4.65 | 6.23 | 1.20 | 4.56 | 2.46 |
| 1985 .......... | 13.01 | 10.95 | 1.59 | 8.20 | 1.73 | 4.06 | 6.34 | 1.23 | 4.38 | 2.47 |
| 1986 .......... | 13.26 | 11.07 | 1.09 | 8.54 | 1.88 | 5.20 | 9.22 | 1.31 | 5.39 | 2.23 |
| 1987 .......... | 13.52 | 12.02 | 1.04 | 9.46 | 2.09 | 6.34 | 10.79 | 1.59 | 6.64 | 2.31 |
| 1988 .......... | 13.91 | 13.47 | 1.25 | 11.35 | 2.40 | 7.67 | 12.63 | 2.20 | 8.02 | 2.67 |
| 1989 .......... | 14.32 | 14.72 | 1.43 | 12.41 | 2.79 | 7.69 | 12.53 | 3.17 | 7.65 | 3.15 |
| 1990 .......... | 14.91 | 15.94 | 1.58 | 13.07 | 3.20 | 8.55 | 12.80 | 3.71 | 8.17 | 3.78 |
| 1991 .......... | 15.58 | 17.28 | 1.84 | 13.53 | 3.58 | 8.79 | 14.67 | 4.61 | 8.20 | 4.35 |
| 1992 .......... | 16.09 | 17.17 | 2.17 | 13.02 | 3.92 | 9.09 | 16.38 | 5.22 | 7.76 | 4.95 |
| 1993 .......... | 16.51 | 16.55 | 2.40 | 12.49 | 4.29 | 8.82 | 19.21 | 5.64 | 8.85 | 5.25 |
| 1994 .......... | 16.87 | 15.88 | 2.47 | 14.12 | 4.61 | 9.19 | 21.35 | 6.40 | 8.76 | 6.29 |
| 1995 .......... | 17.19 | 16.10 | 1.51 | 15.27 | 4.82 | 10.54 | 23.82 | 7.29 | 9.91 | 7.33 |
| 1996 .......... | 17.70 | 16.64 | 1.54 | 16.88 | 5.14 | 11.32 | 21.00 | 8.22 | 10.81 | 8.32 |
| 1997 .......... | 18.27 | 16.47 | 1.78 | 16.58 | 5.42 | 12.04 | 19.54 | 7.86 | 10.81 | 8.24 |
| 1998 .......... | 18.66 | 15.60 | 1.84 | 14.92 | 5.47 | 12.02 | 18.29 | 5.39 | 9.01 | 7.77 |
| 1999 .......... | 19.20 | 15.60 | 2.12 | 15.89 | 5.44 | 11.91 | 20.89 | 6.71 | 9.14 | 7.18 |

| Year | Sri Lanka | Taiwan | Austria[3] | Belgium | Denmark | Finland[4] | France | Germany[5] | Greece | Ireland |
|---|---|---|---|---|---|---|---|---|---|---|
| 1975 .......... | $0.28 | $0.40 | $4.51 | $6.41 | $6.28 | $4.61 | $4.52 | $6.31 | $1.69 | $3.03 |
| 1976 .......... | .24 | .46 | 4.78 | 6.90 | 6.63 | 5.19 | 4.70 | 6.68 | 1.92 | 2.86 |
| 1977 .......... | .32 | .53 | 5.67 | 8.29 | 7.25 | 5.58 | 5.21 | 7.81 | 2.29 | 3.12 |
| 1978 .......... | .26 | .62 | 6.91 | 10.14 | 8.98 | 5.88 | 6.43 | 9.58 | 2.84 | 3.97 |
| 1979 .......... | .23 | .79 | 7.96 | 11.82 | 10.53 | 7.51 | 7.69 | 11.21 | 3.37 | 4.85 |
| 1980 .......... | .22 | 1.00 | 8.88 | 13.11 | 10.83 | 8.24 | 8.94 | 12.25 | 3.73 | 5.95 |
| 1981 .......... | .21 | 1.21 | 7.78 | 11.31 | 9.41 | 8.04 | 8.02 | 10.45 | 3.66 | 5.59 |
| 1982 .......... | .24 | 1.24 | 7.78 | 9.49 | 8.87 | 8.03 | 7.85 | 10.28 | 4.12 | 5.71 |
| 1983 .......... | .25 | 1.29 | 7.81 | 9.08 | 8.69 | 7.54 | 7.74 | 10.19 | 3.78 | 5.67 |
| 1984 .......... | .25 | 1.42 | 7.35 | 8.63 | 8.03 | 7.77 | 7.29 | 9.37 | 3.74 | 5.59 |
| 1985 .......... | .28 | 1.50 | 7.58 | 8.97 | 8.13 | 8.16 | 7.52 | 9.53 | 3.66 | 5.92 |
| 1986 .......... | .29 | 1.73 | 10.73 | 12.43 | 11.07 | 10.71 | 10.28 | 13.34 | 4.07 | 8.02 |
| 1987 .......... | .30 | 2.26 | 13.67 | 15.25 | 14.61 | 13.44 | 12.29 | 16.91 | 4.61 | 9.31 |
| 1988 .......... | .31 | 2.81 | 14.52 | 15.82 | 15.19 | 15.70 | 12.95 | 18.16 | 5.22 | 10.00 |
| 1989 .......... | .31 | 3.52 | 14.16 | 15.48 | 14.53 | 16.85 | 12.65 | 17.66 | 5.49 | 9.61 |
| 1990 .......... | .35 | 3.93 | 17.75 | 19.17 | 18.04 | 21.03 | 15.49 | 21.88 | 6.76 | 11.66 |
| 1991 .......... | .40 | 4.36 | 18.09 | 19.75 | 18.39 | 21.25 | 15.65 | 22.63 | 6.95 | 11.91 |
| 1992 .......... | .40 | 5.09 | 20.29 | 22.05 | 20.20 | 19.92 | 17.47 | 25.38 | 7.60 | 13.12 |
| 1993 .......... | .42 | 5.24 | 20.16 | 21.44 | 19.11 | 16.63 | 16.79 | 25.19 | 7.23 | 11.90 |
| 1994 .......... | .45 | 5.56 | 21.55 | 23.07 | 20.30 | 19.06 | 17.63 | 26.70 | 7.73 | 12.42 |
| 1995 .......... | .48 | 5.94 | 25.32 | 26.65 | 24.07 | 24.10 | 20.01 | 31.58 | 9.17 | 13.61 |
| 1996 .......... | .48 | 5.95 | 24.80 | 25.97 | 24.11 | 23.41 | 19.93 | 31.20 | 9.59 | 13.91 |
| 1997 .......... | .46 | 5.90 | 21.97 | 22.88 | 22.03 | 21.32 | 17.99 | 27.68 | 9.20 | 13.61 |
| 1998 .......... | .47 | 5.27 | 22.21 | 23.20 | 22.69 | 21.66 | 18.28 | 27.52 | 8.91 | 13.39 |
| 1999 .......... | – | 5.62 | 21.83 | 22.82 | 22.96 | 21.10 | 17.98 | 26.93 | – | 13.57 |

See footnotes at end of table.

Table 61. **Hourly compensation costs in U.S. dollars for production workers in manufacturing, 29 countries or areas, 1975-99—Continued**

| Year | Italy | Luxembourg | Netherlands | Norway | Portugal | Spain | Sweden | Switzerland | United Kingdom |
|---|---|---|---|---|---|---|---|---|---|
| 1975 | $4.67 | $6.50 | $6.58 | $6.77 | $1.58 | $2.53 | $7.18 | $6.09 | $3.37 |
| 1976 | 4.34 | 6.99 | 6.90 | 7.52 | 1.66 | 2.86 | 8.25 | 6.45 | 3.21 |
| 1977 | 4.99 | 8.06 | 8.02 | 8.56 | 1.58 | 3.18 | 8.88 | 6.88 | 3.45 |
| 1978 | 5.83 | 9.86 | 9.98 | 9.51 | 1.63 | 3.88 | 9.65 | 9.59 | 4.41 |
| 1979 | 7.06 | 11.12 | 11.41 | 10.28 | 1.68 | 5.31 | 11.33 | 10.56 | 5.70 |
| 1980 | 8.15 | 12.03 | 12.06 | 11.59 | 2.06 | 5.89 | 12.51 | 11.09 | 7.56 |
| 1981 | 7.57 | 9.85 | 9.91 | 11.01 | 2.04 | 5.55 | 11.80 | 10.14 | 7.31 |
| 1982 | 7.44 | 8.61 | 9.78 | 10.83 | 1.88 | 5.28 | 10.07 | 10.42 | 6.92 |
| 1983 | 7.70 | 8.15 | 9.49 | 10.32 | 1.62 | 4.56 | 8.89 | 10.46 | 6.49 |
| 1984 | 7.35 | 7.79 | 8.70 | 10.07 | 1.45 | 4.47 | 9.17 | 9.64 | 6.04 |
| 1985 | 7.63 | 7.81 | 8.75 | 10.37 | 1.53 | 4.66 | 9.66 | 9.66 | 6.27 |
| 1986 | 10.47 | 10.86 | 12.22 | 13.24 | 2.08 | 6.25 | 12.43 | 13.76 | 7.66 |
| 1987 | 13.02 | 13.35 | 15.14 | 16.79 | 2.52 | 7.63 | 15.12 | 17.08 | 9.09 |
| 1988 | 13.98 | 14.22 | 15.83 | 18.45 | 2.78 | 8.55 | 16.82 | 18.01 | 10.61 |
| 1989 | 14.40 | 13.92 | 15.00 | 18.29 | 2.97 | 8.96 | 17.52 | 16.73 | 10.56 |
| 1990 | 17.45 | 16.74 | 18.06 | 21.47 | 3.77 | 11.38 | 20.93 | 20.86 | 12.70 |
| 1991 | 18.32 | 17.14 | 18.13 | 21.63 | 4.24 | 12.29 | 22.15 | 21.69 | 13.74 |
| 1992 | 19.35 | 19.10 | 20.10 | 23.03 | 5.17 | 13.50 | 24.59 | 23.23 | 14.37 |
| 1993 | 15.80 | 18.74 | 19.94 | 20.21 | 4.50 | 11.62 | 17.59 | 22.63 | 12.41 |
| 1994 | 15.89 | 20.33 | 20.73 | 20.97 | 4.60 | 11.54 | 18.62 | 24.91 | 12.80 |
| 1995 | 16.22 | 23.35 | 24.12 | 24.38 | 5.37 | 12.88 | 21.44 | 29.30 | 13.67 |
| 1996 | 17.75 | 22.55 | 23.22 | 25.05 | 5.58 | 13.51 | 24.37 | 28.34 | 14.09 |
| 1997 | 17.57 | 19.02 | 20.98 | 23.72 | 5.38 | 12.24 | 22.22 | 24.19 | 15.47 |
| 1998 | 17.11 | 18.74 | 21.17 | 23.50 | 5.48 | 12.14 | 22.02 | 24.38 | 16.43 |
| 1999 | 16.60 | – | 20.94 | 23.91 | – | 12.11 | 21.58 | 23.56 | 16.56 |

[1] Production and nonproduction workers other than those in managerial, executive, professional, and higher supervisory positions.

[2] Hong Kong Special Administrative Region of China. Average of selected manufacturing industries.

[3] Excludes handicraft manufacturers, printing and publishing, and miscellaneous manufacturing.

[4] Including mining and electrical power plants.

[5] Former West Germany. Excluding handicraft manufacturers.

Dash indicates data not available.

Table 62. **Output per hour, hourly compensation, and unit labor costs in manufacturing, 12 countries, 1950-99**

(Indexes: 1992=100)

| Year | United States | Canada | Japan | Belgium | Denmark | France | Germany (unified) | Former West Germany | Italy | Netherlands | Norway | Sweden | United Kingdom |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Output per hour | | | | | | |
| 1950 ... | _ | 26.6 | _ | _ | 22.6 | 13.2 | _ | 13.2 | 11.5 | 11.3 | 24.7 | 19.5 | 25.5 |
| 1955 ... | _ | 32.7 | 8.6 | _ | 24.6 | 16.6 | _ | 19.7 | 16.1 | 14.4 | 28.7 | 21.3 | 27.5 |
| 1960 ... | _ | 38.7 | 13.8 | 18.0 | 29.9 | 21.8 | _ | 29.2 | 20.2 | 18.6 | 37.0 | 27.3 | 31.1 |
| 1961 ... | _ | 40.8 | 15.6 | 18.2 | 31.6 | 23.1 | _ | 30.6 | 21.8 | 19.6 | 38.3 | 28.7 | 31.2 |
| 1962 ... | _ | 44.3 | 16.4 | 19.2 | 33.2 | 24.7 | _ | 32.8 | 24.1 | 20.4 | 38.3 | 30.9 | 31.9 |
| 1963 ... | _ | 46.2 | 17.7 | 19.9 | 34.3 | 26.0 | _ | 34.1 | 24.8 | 21.2 | 40.3 | 32.7 | 33.6 |
| 1964 ... | _ | 48.2 | 20.1 | 21.2 | 37.1 | 28.0 | _ | 37.1 | 25.0 | 23.1 | 42.6 | 35.5 | 35.8 |
| 1965 ... | _ | 50.3 | 21.0 | 22.3 | 38.9 | 30.0 | _ | 39.3 | 27.9 | 24.7 | 45.1 | 38.2 | 36.8 |
| 1966 ... | _ | 51.0 | 23.0 | 23.8 | 40.8 | 32.5 | _ | 40.9 | 30.3 | 26.3 | 47.0 | 39.8 | 38.1 |
| 1967 ... | _ | 51.5 | 26.0 | 25.1 | 43.8 | 34.5 | _ | 43.4 | 31.8 | 28.3 | 48.7 | 43.2 | 39.8 |
| 1968 ... | _ | 54.5 | 29.1 | 27.3 | 47.8 | 38.1 | _ | 47.0 | 34.3 | 31.8 | 51.7 | 47.2 | 42.7 |
| 1969 ... | _ | 57.4 | 33.4 | 29.9 | 49.8 | 40.5 | _ | 50.4 | 35.6 | 34.9 | 56.5 | 50.9 | 43.7 |
| 1970 ... | _ | 56.6 | 37.5 | 32.9 | 52.7 | 43.0 | _ | 52.0 | 37.9 | 38.1 | 58.3 | 52.2 | 44.7 |
| 1971 ... | _ | 60.0 | 39.8 | 35.1 | 56.3 | 45.5 | _ | 54.0 | 38.5 | 40.4 | 60.0 | 54.5 | 46.8 |
| 1972 ... | _ | 62.7 | 43.6 | 39.2 | 60.8 | 47.5 | _ | 57.4 | 41.7 | 43.6 | 63.1 | 57.2 | 49.4 |
| 1973 ... | _ | 66.2 | 47.6 | 43.5 | 66.9 | 50.9 | _ | 61.1 | 45.2 | 48.3 | 66.9 | 61.4 | 53.0 |
| 1974 ... | _ | 67.2 | 48.8 | 45.8 | 69.1 | 52.0 | _ | 63.2 | 48.1 | 51.9 | 69.5 | 64.0 | 53.9 |
| 1975 ... | _ | 64.7 | 50.2 | 47.6 | 76.1 | 53.8 | _ | 65.9 | 46.5 | 51.2 | 68.8 | 65.0 | 52.8 |
| 1976 ... | _ | 70.3 | 53.2 | 52.4 | 78.8 | 57.1 | _ | 70.6 | 52.9 | 56.8 | 70.5 | 66.0 | 55.0 |
| 1977 ... | 68.3 | 74.9 | 55.3 | 55.0 | 80.4 | 60.5 | _ | 72.7 | 54.0 | 61.4 | 71.5 | 65.0 | 55.5 |
| 1978 ... | 69.2 | 76.7 | 57.5 | 58.3 | 81.6 | 63.2 | _ | 75.2 | 57.5 | 65.4 | 72.8 | 66.8 | 56.3 |
| 1979 ... | 70.1 | 75.9 | 62.2 | 61.4 | 85.6 | 66.2 | _ | 78.4 | 63.0 | 68.6 | 78.1 | 72.0 | 56.7 |
| 1980 ... | 70.5 | 75.1 | 63.2 | 65.4 | 90.3 | 66.5 | _ | 77.2 | 65.9 | 69.2 | 76.7 | 73.1 | 56.1 |
| 1981 ... | 74.1 | 77.8 | 65.2 | 70.1 | 91.8 | 68.5 | _ | 78.7 | 67.4 | 70.8 | 76.5 | 72.7 | 59.0 |
| 1982 ... | 76.2 | 77.3 | 67.9 | 73.5 | 92.1 | 73.3 | _ | 78.8 | 68.6 | 72.1 | 79.7 | 75.4 | 62.2 |
| 1983 ... | 80.0 | 82.4 | 68.8 | 81.0 | 96.6 | 75.0 | _ | 82.6 | 71.8 | 77.8 | 82.4 | 80.9 | 67.1 |
| 1984 ... | 83.2 | 90.2 | 71.1 | 85.0 | 96.1 | 76.1 | _ | 85.4 | 78.4 | 85.4 | 87.4 | 85.2 | 70.7 |
| 1985 ... | 86.0 | 92.4 | 76.5 | 87.0 | 96.7 | 79.1 | _ | 89.1 | 82.6 | 89.0 | 90.2 | 86.2 | 72.3 |
| 1986 ... | 86.0 | 90.0 | 76.1 | 87.8 | 91.1 | 80.4 | _ | 89.6 | 83.8 | 90.8 | 89.0 | 87.5 | 74.8 |
| 1987 ... | 92.9 | 90.6 | 80.2 | 88.9 | 90.6 | 81.8 | _ | 88.1 | 85.7 | 91.6 | 93.3 | 89.2 | 79.4 |
| 1988 ... | 96.9 | 90.9 | 83.9 | 92.0 | 94.1 | 87.5 | _ | 91.5 | 86.7 | 93.7 | 92.2 | 90.5 | 82.3 |
| 1989 ... | 95.7 | 93.7 | 88.5 | 96.9 | 99.6 | 91.9 | _ | 94.6 | 89.4 | 97.1 | 94.6 | 93.2 | 86.1 |
| 1990 ... | 96.9 | 95.7 | 94.4 | 96.8 | 99.1 | 93.5 | _ | 99.0 | 92.5 | 98.6 | 96.6 | 94.6 | 88.3 |
| 1991 ... | 97.9 | 95.3 | 99.0 | 99.1 | 99.6 | 96.9 | 99.0 | 101.9 | 95.2 | 99.6 | 97.5 | 95.5 | 92.1 |
| 1992 ... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1993 ... | 102.1 | 104.5 | 101.7 | 102.5 | 104.5 | 100.6 | 101.8 | 100.6 | 102.9 | 101.4 | 100.6 | 107.3 | 104.0 |
| 1994 ... | 107.3 | 109.9 | 103.3 | 108.4 | _ | 108.5 | 109.9 | 107.9 | 105.6 | 112.7 | 101.4 | 119.4 | 106.8 |
| 1995 ... | 113.8 | 111.0 | 111.0 | 113.2 | _ | 114.5 | 112.8 | 111.2 | 109.3 | 117.7 | 102.0 | 121.9 | 104.3 |
| 1996 ... | 117.0 | 109.5 | 116.1 | 117.1 | _ | 115.0 | 115.3 | 115.1 | 109.5 | 119.7 | 102.0 | 124.5 | 102.3 |
| 1997 ... | 121.2 | 112.8 | 121.0 | 126.8 | _ | 122.6 | 121.0 | 121.8 | 111.5 | 121.9 | 103.0 | 132.9 | 103.0 |
| 1998 ... | 126.8 | 112.5 | 121.2 | 128.8 | _ | 124.0 | 121.0 | 127.1 | 111.1 | 124.6 | 103.9 | 136.7 | 102.9 |
| 1999 ... | 135.1 | 115.2 | 125.8 | 128.9 | _ | 128.9 | 122.4 | _ | 112.9 | 127.3 | 103.9 | 140.8 | 107.5 |

See footnotes at end of table.

## Table 62. **Output per hour, hourly compensation, and unit labor costs in manufacturing, 12 countries, 1950-99—Continued**

(Indexes: 1992=100)

| Year | United States | Canada[1] | Japan | Belgium | Denmark | France[1] | Germany (unified) | Former West Germany | Italy | Netherlands | Norway | Sweden[1] | United Kingdom[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hourly compensation in national currency | | | | | | | | | | | | |
| 1950 ... | 8.7 | 5.4 | — | — | 2.5 | 1.6 | — | 3.4 | 0.8 | 3.1 | 2.2 | 1.9 | 1.6 |
| 1955 ... | 11.7 | 7.7 | 3.1 | — | 3.4 | 2.8 | — | 5.0 | 1.2 | 4.5 | 3.4 | 2.9 | 2.3 |
| 1960 ... | 14.9 | 9.9 | 4.3 | 5.4 | 4.6 | 4.3 | — | 8.1 | 1.6 | 6.4 | 4.7 | 4.1 | 3.1 |
| 1961 ... | 15.3 | 10.2 | 5.0 | 5.7 | 5.2 | 4.7 | — | 9.1 | 1.8 | 7.3 | 5.2 | 4.5 | 3.3 |
| 1962 ... | 15.9 | 10.6 | 5.7 | 6.2 | 5.6 | 5.2 | — | 10.3 | 2.1 | 7.8 | 5.7 | 5.0 | 3.4 |
| 1963 ... | 16.4 | 11.0 | 6.4 | 6.8 | 6.1 | 5.7 | — | 11.0 | 2.5 | 8.6 | 6.1 | 5.5 | 3.6 |
| 1964 ... | 17.0 | 11.5 | 7.2 | 7.7 | 6.6 | 6.2 | — | 11.9 | 2.6 | 9.9 | 6.5 | 6.0 | 3.8 |
| 1965 ... | 17.4 | 12.2 | 8.1 | 8.5 | 7.4 | 6.7 | — | 13.1 | 2.8 | 11.1 | 7.2 | 6.6 | 4.2 |
| 1966 ... | 18.2 | 13.1 | 8.9 | 9.4 | 8.4 | 7.1 | — | 14.2 | 3.0 | 12.5 | 7.8 | 7.3 | 4.5 |
| 1967 ... | 19.2 | 13.7 | 10.0 | 10.3 | 9.4 | 7.6 | — | 15.0 | 3.3 | 13.8 | 8.8 | 8.1 | 4.7 |
| 1968 ... | 20.7 | 14.7 | 11.6 | 11.0 | 10.3 | 8.6 | — | 16.1 | 3.5 | 15.4 | 9.6 | 8.8 | 5.0 |
| 1969 ... | 22.2 | 15.9 | 13.8 | 12.1 | 11.6 | 9.2 | — | 17.6 | 3.9 | 17.4 | 10.6 | 9.6 | 5.5 |
| 1970 ... | 23.7 | 17.0 | 16.4 | 13.7 | 13.3 | 10.3 | — | 20.7 | 4.7 | 20.2 | 11.8 | 10.7 | 6.3 |
| 1971 ... | 25.2 | 18.1 | 19.0 | 15.9 | 15.2 | 11.6 | — | 23.2 | 5.4 | 23.1 | 13.5 | 12.1 | 7.2 |
| 1972 ... | 26.5 | 19.4 | 21.9 | 18.8 | 16.9 | 12.8 | — | 25.6 | 6.1 | 26.5 | 15.2 | 13.5 | 8.3 |
| 1973 ... | 28.5 | 21.1 | 26.7 | 22.3 | 20.5 | 14.7 | — | 29.0 | 7.2 | 31.6 | 17.1 | 15.2 | 9.5 |
| 1974 ... | 31.6 | 24.6 | 35.0 | 27.4 | 24.8 | 17.4 | — | 33.0 | 9.3 | 37.7 | 20.1 | 17.9 | 11.4 |
| 1975 ... | 35.5 | 28.2 | 40.8 | 33.1 | 29.6 | 21.3 | — | 36.4 | 11.8 | 43.1 | 24.0 | 21.9 | 15.1 |
| 1976 ... | 38.4 | 32.4 | 43.9 | 38.3 | 33.0 | 24.4 | — | 39.1 | 14.6 | 48.1 | 27.7 | 25.7 | 17.6 |
| 1977 ... | 41.8 | 36.0 | 48.5 | 41.4 | 36.5 | 27.7 | — | 42.8 | 17.3 | 52.5 | 31.1 | 28.1 | 19.8 |
| 1978 ... | 45.2 | 38.7 | 51.7 | 44.4 | 40.2 | 31.2 | — | 45.9 | 20.0 | 56.8 | 34.1 | 31.1 | 23.1 |
| 1979 ... | 49.6 | 42.6 | 55.0 | 47.2 | 45.0 | 35.4 | — | 49.3 | 24.2 | 61.1 | 35.8 | 33.5 | 27.5 |
| 1980 ... | 55.6 | 47.4 | 58.5 | 52.5 | 49.6 | 40.8 | — | 53.6 | 28.4 | 64.4 | 39.0 | 37.3 | 33.2 |
| 1981 ... | 61.1 | 53.7 | 62.6 | 57.3 | 54.6 | 47.2 | — | 57.0 | 34.3 | 67.4 | 43.3 | 41.2 | 38.5 |
| 1982 ... | 67.0 | 60.9 | 65.7 | 59.9 | 59.5 | 56.1 | — | 60.4 | 40.4 | 71.5 | 48.2 | 44.2 | 42.4 |
| 1983 ... | 68.8 | 65.2 | 67.5 | 65.7 | 63.6 | 61.9 | — | 63.1 | 47.2 | 74.9 | 52.9 | 49.0 | 45.5 |
| 1984 ... | 71.2 | 68.9 | 69.5 | 71.4 | 67.2 | 67.2 | — | 66.0 | 54.1 | 77.7 | 57.9 | 53.2 | 49.1 |
| 1985 ... | 75.1 | 71.8 | 72.4 | 75.3 | 71.7 | 72.8 | — | 70.0 | 60.8 | 81.8 | 63.4 | 58.6 | 53.1 |
| 1986 ... | 78.5 | 72.8 | 76.0 | 77.3 | 73.2 | 75.8 | — | 72.8 | 63.3 | 85.0 | 69.1 | 63.4 | 57.6 |
| 1987 ... | 80.7 | 74.6 | 77.8 | 79.7 | 80.1 | 78.6 | — | 76.0 | 66.8 | 87.8 | 78.4 | 67.6 | 64.8 |
| 1988 ... | 84.0 | 77.4 | 79.1 | 81.1 | 82.9 | 81.6 | — | 79.1 | 69.3 | 87.7 | 83.3 | 71.8 | 67.7 |
| 1989 ... | 86.6 | 82.5 | 84.0 | 85.9 | 87.7 | 86.0 | — | 83.2 | 75.9 | 88.5 | 87.2 | 79.4 | 72.9 |
| 1990 ... | 90.8 | 88.3 | 90.5 | 90.1 | 92.7 | 90.6 | — | 89.4 | 84.4 | 90.8 | 92.3 | 87.8 | 80.9 |
| 1991 ... | 95.6 | 95.0 | 96.4 | 97.3 | 95.9 | 96.2 | 92.2 | 95.1 | 93.6 | 95.2 | 97.5 | 95.5 | 90.5 |
| 1992 ... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1993 ... | 102.7 | 102.0 | 102.8 | 104.8 | 104.6 | 103.0 | 106.4 | 105.9 | 107.5 | 103.7 | 101.5 | 97.1 | 104.3 |
| 1994 ... | 105.6 | 103.7 | 104.9 | 106.1 | — | 105.6 | 112.0 | 111.7 | 107.8 | 108.2 | 104.4 | 99.8 | 106.5 |
| 1995 ... | 107.9 | 106.0 | 108.3 | 109.2 | — | 108.4 | 118.2 | 117.7 | 112.8 | 110.6 | 109.2 | 106.3 | 107.0 |
| 1996 ... | 109.3 | 105.1 | 109.2 | 110.9 | — | 110.2 | 123.8 | 123.7 | 120.3 | 113.2 | 113.6 | 114.1 | 107.1 |
| 1997 ... | 111.4 | 108.2 | 112.9 | 114.7 | — | 113.0 | 126.3 | 126.6 | 125.4 | 116.2 | 118.7 | 119.1 | 110.3 |
| 1998 ... | 117.3 | 111.2 | 115.8 | 116.4 | — | 114.9 | 127.5 | 127.6 | 123.0 | 119.8 | 126.2 | 124.1 | 114.6 |
| 1999 ... | 122.0 | 113.0 | 115.5 | 116.8 | — | 119.3 | 129.6 | — | 126.5 | 123.5 | 133.4 | 127.1 | 119.7 |

See footnotes at end of table.

Table 62. **Output per hour, hourly compensation, and unit labor costs in manufacturing, 12 countries, 1950-99—Continued**

(Indexes: 1992=100)

| Year | United States | Canada[1] | Japan | Belgium | Denmark | France[1] | Germany (unified) | Former West Germany | Italy | Netherlands | Norway | Sweden[1] | United Kingdom[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hourly compensation in U.S. dollars | | | | | | | | | | | | |
| 1950 ... | 8.7 | 6.0 | – | – | 2.2 | 2.4 | – | 1.3 | 1.7 | 1.4 | 1.9 | 2.1 | 2.5 |
| 1955 ... | 11.7 | 9.4 | 1.1 | – | 3.0 | 4.3 | – | 1.9 | 2.4 | 2.1 | 2.9 | 3.3 | 3.6 |
| 1960 ... | 14.9 | 12.4 | 1.5 | 3.5 | 4.0 | 4.6 | – | 3.0 | 3.2 | 3.0 | 4.1 | 4.6 | 4.9 |
| 1961 ... | 15.3 | 12.2 | 1.8 | 3.7 | 4.5 | 5.1 | – | 3.5 | 3.5 | 3.5 | 4.5 | 5.0 | 5.2 |
| 1962 ... | 15.9 | 12.0 | 2.0 | 4.0 | 4.9 | 5.6 | – | 4.0 | 4.1 | 3.8 | 5.0 | 5.6 | 5.5 |
| 1963 ... | 16.4 | 12.3 | 2.2 | 4.4 | 5.4 | 6.1 | – | 4.3 | 4.9 | 4.2 | 5.3 | 6.2 | 5.7 |
| 1964 ... | 17.0 | 12.9 | 2.5 | 5.0 | 5.8 | 6.6 | – | 4.7 | 5.2 | 4.8 | 5.6 | 6.8 | 6.1 |
| 1965 ... | 17.4 | 13.6 | 2.8 | 5.5 | 6.4 | 7.2 | – | 5.1 | 5.5 | 5.4 | 6.2 | 7.5 | 6.6 |
| 1966 ... | 18.2 | 14.6 | 3.1 | 6.1 | 7.3 | 7.6 | – | 5.5 | 5.9 | 6.1 | 6.8 | 8.2 | 7.2 |
| 1967 ... | 19.2 | 15.4 | 3.5 | 6.7 | 8.1 | 8.2 | – | 5.9 | 6.5 | 6.7 | 7.6 | 9.1 | 7.3 |
| 1968 ... | 20.7 | 16.5 | 4.1 | 7.1 | 8.3 | 9.2 | – | 6.3 | 7.0 | 7.5 | 8.4 | 9.9 | 6.8 |
| 1969 ... | 22.2 | 17.8 | 4.9 | 7.7 | 9.3 | 9.4 | – | 7.0 | 7.6 | 8.5 | 9.3 | 10.8 | 7.4 |
| 1970 ... | 23.7 | 19.7 | 5.8 | 8.9 | 10.7 | 9.9 | – | 8.9 | 9.2 | 9.8 | 10.3 | 12.0 | 8.6 |
| 1971 ... | 25.2 | 21.7 | 6.9 | 10.5 | 12.4 | 11.1 | – | 10.4 | 10.8 | 11.6 | 11.9 | 13.8 | 10.0 |
| 1972 ... | 26.5 | 23.7 | 9.1 | 13.7 | 14.7 | 13.4 | – | 12.6 | 12.8 | 14.5 | 14.3 | 16.5 | 11.8 |
| 1973 ... | 28.5 | 25.5 | 12.5 | 18.5 | 20.5 | 17.5 | – | 17.1 | 15.1 | 20.0 | 18.5 | 20.3 | 13.2 |
| 1974 ... | 31.6 | 30.3 | 15.2 | 22.6 | 24.6 | 19.2 | – | 19.9 | 17.7 | 24.7 | 22.6 | 23.5 | 15.1 |
| 1975 ... | 35.5 | 33.5 | 17.4 | 29.0 | 31.1 | 26.3 | – | 23.1 | 22.3 | 30.1 | 28.6 | 30.8 | 19.0 |
| 1976 ... | 38.4 | 39.8 | 18.8 | 31.9 | 32.9 | 27.0 | – | 24.3 | 21.7 | 32.0 | 31.6 | 34.3 | 17.9 |
| 1977 ... | 41.8 | 41.0 | 22.9 | 37.1 | 36.7 | 29.8 | – | 28.8 | 24.2 | 37.6 | 36.3 | 36.7 | 19.6 |
| 1978 ... | 45.2 | 41.0 | 31.4 | 45.4 | 44.1 | 36.7 | – | 35.8 | 29.0 | 46.2 | 40.4 | 40.2 | 25.1 |
| 1979 ... | 49.6 | 43.9 | 32.0 | 51.7 | 51.6 | 44.0 | – | 42.0 | 35.9 | 53.5 | 43.9 | 45.6 | 33.0 |
| 1980 ... | 55.6 | 49.0 | 32.7 | 57.7 | 53.2 | 51.1 | – | 46.1 | 40.8 | 57.0 | 49.0 | 51.4 | 43.7 |
| 1981 ... | 61.1 | 54.1 | 36.0 | 49.5 | 46.2 | 46.0 | – | 39.3 | 37.1 | 47.4 | 46.9 | 47.4 | 44.1 |
| 1982 ... | 67.0 | 59.6 | 33.4 | 42.1 | 43.0 | 45.1 | – | 38.8 | 36.8 | 47.1 | 46.4 | 41.0 | 42.0 |
| 1983 ... | 68.8 | 63.9 | 36.0 | 41.3 | 42.0 | 43.0 | – | 38.6 | 38.2 | 46.1 | 45.0 | 37.2 | 39.0 |
| 1984 ... | 71.2 | 64.3 | 37.1 | 39.7 | 39.2 | 40.7 | – | 36.3 | 37.9 | 42.6 | 44.1 | 37.5 | 37.2 |
| 1985 ... | 75.1 | 63.5 | 38.5 | 40.8 | 40.9 | 42.9 | – | 37.2 | 39.2 | 43.3 | 45.8 | 39.7 | 39.0 |
| 1986 ... | 78.5 | 63.3 | 57.2 | 55.6 | 54.6 | 57.9 | – | 52.4 | 52.3 | 61.1 | 58.0 | 51.8 | 47.8 |
| 1987 ... | 80.7 | 68.0 | 68.2 | 68.6 | 70.6 | 69.2 | – | 66.0 | 63.5 | 76.2 | 72.3 | 62.1 | 60.2 |
| 1988 ... | 84.0 | 76.0 | 78.2 | 70.9 | 74.3 | 72.5 | – | 70.4 | 65.5 | 78.0 | 79.3 | 68.2 | 68.3 |
| 1989 ... | 86.6 | 84.1 | 77.1 | 70.1 | 72.3 | 71.4 | – | 69.1 | 68.1 | 73.4 | 78.4 | 71.6 | 67.7 |
| 1990 ... | 90.8 | 91.5 | 79.1 | 86.6 | 90.4 | 88.0 | – | 86.4 | 86.8 | 87.7 | 91.7 | 86.4 | 81.7 |
| 1991 ... | 95.6 | 100.1 | 90.8 | 91.5 | 90.5 | 90.2 | 86.7 | 89.4 | 92.9 | 89.4 | 93.3 | 91.9 | 90.5 |
| 1992 ... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1993 ... | 102.7 | 95.5 | 117.3 | 97.4 | 97.4 | 96.2 | 100.4 | 100.0 | 84.2 | 98.1 | 88.8 | 72.6 | 88.7 |
| 1994 ... | 105.6 | 91.7 | 130.1 | 102.1 | – | 100.8 | 107.8 | 107.6 | 82.4 | 104.6 | 91.9 | 75.3 | 92.4 |
| 1995 ... | 107.9 | 93.3 | 146.2 | 119.1 | – | 115.1 | 128.9 | 128.3 | 85.3 | 121.2 | 107.1 | 86.7 | 95.6 |
| 1996 ... | 109.3 | 93.1 | 127.2 | 115.1 | – | 114.1 | 128.5 | 128.4 | 96.1 | 118.0 | 109.3 | 99.1 | 94.7 |
| 1997 ... | 111.4 | 94.4 | 118.3 | 103.0 | – | 102.5 | 113.7 | 114.0 | 90.7 | 104.6 | 104.1 | 90.7 | 102.3 |
| 1998 ... | 117.3 | 90.6 | 112.0 | 103.0 | – | 103.1 | 113.1 | 113.3 | 87.3 | 106.2 | 103.8 | 90.9 | 107.5 |
| 1999 ... | 122.0 | 91.9 | 128.8 | 99.2 | – | 102.6 | 110.3 | – | 85.8 | 105.0 | 106.2 | 89.5 | 109.6 |

See footnotes at end of table.

## Table 62. Output per hour, hourly compensation, and unit labor costs in manufacturing, 12 countries, 1950-99—Continued

(Indexes: 1992=100)

| Year | United States | Canada¹ | Japan | Belgium | Denmark | France¹ | Germany (unified) | Former West Germany | Italy | Netherlands | Norway | Sweden¹ | United Kingdom¹ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit labor costs in national currency | | | | | | | | | | | | |
| 1950 ... | _ | 20.3 | _ | _ | 11.0 | 12.2 | _ | 25.5 | 7.3 | 27.5 | 8.9 | 9.5 | 6.3 |
| 1955 ... | _ | 23.5 | 36.4 | _ | 13.8 | 17.0 | _ | 25.4 | 7.5 | 31.3 | 11.7 | 13.8 | 8.3 |
| 1960 ... | _ | 25.6 | 31.3 | 30.1 | 15.4 | 19.5 | _ | 27.8 | 7.9 | 34.4 | 12.8 | 15.0 | 9.8 |
| 1961 ... | _ | 25.0 | 32.1 | 31.5 | 16.3 | 20.3 | _ | 29.7 | 8.1 | 37.1 | 13.5 | 15.6 | 10.5 |
| 1962 ... | _ | 23.9 | 34.9 | 32.1 | 17.0 | 21.1 | _ | 31.5 | 8.6 | 38.2 | 14.9 | 16.2 | 10.8 |
| 1963 ... | _ | 23.8 | 36.1 | 34.2 | 17.9 | 21.8 | _ | 32.2 | 9.9 | 40.4 | 15.1 | 16.9 | 10.7 |
| 1964 ... | _ | 23.8 | 35.8 | 36.3 | 17.9 | 22.0 | _ | 32.1 | 10.5 | 42.9 | 15.2 | 16.9 | 10.7 |
| 1965 ... | _ | 24.2 | 38.7 | 38.3 | 18.9 | 22.3 | _ | 33.3 | 10.1 | 45.1 | 15.9 | 17.4 | 11.4 |
| 1966 ... | _ | 25.6 | 38.9 | 39.6 | 20.5 | 21.8 | _ | 34.7 | 9.9 | 47.3 | 16.7 | 18.2 | 11.9 |
| 1967 ... | _ | 26.7 | 38.5 | 40.9 | 21.4 | 22.1 | _ | 34.5 | 10.4 | 48.8 | 18.0 | 18.7 | 11.7 |
| 1968 ... | _ | 26.9 | 40.0 | 40.3 | 21.6 | 22.6 | _ | 34.3 | 10.2 | 48.4 | 18.7 | 18.5 | 11.7 |
| 1969 ... | _ | 27.6 | 41.4 | 40.4 | 23.4 | 22.7 | _ | 35.0 | 10.9 | 50.0 | 18.8 | 18.8 | 12.5 |
| 1970 ... | _ | 30.1 | 43.8 | 41.7 | 25.2 | 24.0 | _ | 39.8 | 12.4 | 52.9 | 20.3 | 20.6 | 14.1 |
| 1971 ... | _ | 30.2 | 47.8 | 45.2 | 27.1 | 25.5 | _ | 42.9 | 14.1 | 57.1 | 22.5 | 22.2 | 15.4 |
| 1972 ... | _ | 31.0 | 50.1 | 47.9 | 27.8 | 26.9 | _ | 44.7 | 14.6 | 60.8 | 24.1 | 23.6 | 16.8 |
| 1973 ... | _ | 32.0 | 56.2 | 51.2 | 30.6 | 28.8 | _ | 47.5 | 15.8 | 65.3 | 25.5 | 24.8 | 17.9 |
| 1974 ... | _ | 36.6 | 71.8 | 59.9 | 35.9 | 33.5 | _ | 52.1 | 19.4 | 72.7 | 28.9 | 27.9 | 21.1 |
| 1975 ... | _ | 43.6 | 81.3 | 69.5 | 38.9 | 39.5 | _ | 55.2 | 25.4 | 84.3 | 34.8 | 33.7 | 28.7 |
| 1976 ... | _ | 46.2 | 82.6 | 73.1 | 41.8 | 42.7 | _ | 55.4 | 27.7 | 84.8 | 39.3 | 38.9 | 31.9 |
| 1977 ... | 61.2 | 48.1 | 87.6 | 75.3 | 45.4 | 45.8 | _ | 58.8 | 32.1 | 85.5 | 43.5 | 43.3 | 35.7 |
| 1978 ... | 65.3 | 50.5 | 89.8 | 76.1 | 49.3 | 49.4 | _ | 61.1 | 34.7 | 86.8 | 46.8 | 46.6 | 41.1 |
| 1979 ... | 70.7 | 56.0 | 88.4 | 76.8 | 52.5 | 53.5 | _ | 62.9 | 38.4 | 89.0 | 45.8 | 46.6 | 48.5 |
| 1980 ... | 78.8 | 63.2 | 92.5 | 80.3 | 55.0 | 61.3 | _ | 69.4 | 43.1 | 93.0 | 50.8 | 51.0 | 59.1 |
| 1981 ... | 82.4 | 69.0 | 96.0 | 81.7 | 59.5 | 69.0 | _ | 72.4 | 50.9 | 95.1 | 56.6 | 56.6 | 65.3 |
| 1982 ... | 87.9 | 78.8 | 96.7 | 81.5 | 64.6 | 76.5 | _ | 76.7 | 58.9 | 99.2 | 60.5 | 58.7 | 68.2 |
| 1983 ... | 86.0 | 79.0 | 98.0 | 81.1 | 65.8 | 82.6 | _ | 76.4 | 65.7 | 96.2 | 64.2 | 60.7 | 67.8 |
| 1984 ... | 85.6 | 76.3 | 97.7 | 84.0 | 69.9 | 88.2 | _ | 77.3 | 68.9 | 90.9 | 66.3 | 62.5 | 69.4 |
| 1985 ... | 87.3 | 77.7 | 94.6 | 86.5 | 74.2 | 92.0 | _ | 78.6 | 73.5 | 91.8 | 70.2 | 68.0 | 73.5 |
| 1986 ... | 91.2 | 81.0 | 99.9 | 88.0 | 80.4 | 94.3 | _ | 81.2 | 75.6 | 93.7 | 77.7 | 72.4 | 77.0 |
| 1987 ... | 86.9 | 82.4 | 97.0 | 89.7 | 88.4 | 96.1 | _ | 86.3 | 78.0 | 95.9 | 84.1 | 75.8 | 81.6 |
| 1988 ... | 86.7 | 85.2 | 94.3 | 88.1 | 88.2 | 93.3 | _ | 86.5 | 79.9 | 93.6 | 90.4 | 79.4 | 82.3 |
| 1989 ... | 90.5 | 88.0 | 94.9 | 88.7 | 88.1 | 93.6 | _ | 87.9 | 84.9 | 91.1 | 92.2 | 85.1 | 84.7 |
| 1990 ... | 93.7 | 92.3 | 95.9 | 93.0 | 93.6 | 96.8 | _ | 90.3 | 91.3 | 92.1 | 95.6 | 92.9 | 91.7 |
| 1991 ... | 97.6 | 99.7 | 97.4 | 98.1 | 96.3 | 99.3 | 93.1 | 93.3 | 98.4 | 95.5 | 100.0 | 100.0 | 98.2 |
| 1992 ... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1993 ... | 100.6 | 97.6 | 101.1 | 102.3 | 100.1 | 102.4 | 104.5 | 105.3 | 104.4 | 102.3 | 100.9 | 90.5 | 100.3 |
| 1994 ... | 98.5 | 94.3 | 101.5 | 97.9 | 93.0 | 97.3 | 101.9 | 103.6 | 102.1 | 96.0 | 102.9 | 83.5 | 99.7 |
| 1995 ... | 94.8 | 95.5 | 97.6 | 96.4 | 93.8 | 94.7 | 104.7 | 105.9 | 103.2 | 94.0 | 107.0 | 87.2 | 102.6 |
| 1996 ... | 93.5 | 95.9 | 94.0 | 94.7 | 100.9 | 95.9 | 107.4 | 107.5 | 109.9 | 94.5 | 111.4 | 91.7 | 104.8 |
| 1997 ... | 91.9 | 95.9 | 93.3 | 90.5 | 102.0 | 92.2 | 104.4 | 103.9 | 112.4 | 95.3 | 115.2 | 89.6 | 107.1 |
| 1998 ... | 92.5 | 98.8 | 95.5 | 90.3 | 102.8 | 92.7 | 105.3 | 100.4 | 110.8 | 96.1 | 121.5 | 90.8 | 111.4 |
| 1999 ... | 90.3 | 98.1 | 91.8 | 90.6 | 108.9 | 92.6 | 105.9 | _ | 112.0 | 97.0 | 128.4 | 90.3 | 111.4 |

See footnotes at end of table.

Table 62. **Output per hour, hourly compensation, and unit labor costs in manufacturing, 12 countries, 1950-99—Continued**

(Indexes: 1992=100)

| Year | United States | Canada[1] | Japan | Belgium | Denmark | France[1] | Germany (unified) | Former West Germany | Italy | Netherlands | Norway | Sweden[1] | United Kingdom[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit labor costs in U.S. dollars | | | | | | | | | | | | |
| 1950 ... | _ | 22.5 | _ | _ | 9.6 | 18.5 | _ | 9.5 | 14.4 | 12.7 | 7.8 | 10.7 | 10.0 |
| 1955 ... | _ | 28.8 | 12.8 | _ | 12.0 | 25.7 | _ | 9.4 | 14.8 | 14.5 | 10.2 | 15.5 | 13.2 |
| 1960 ... | _ | 32.0 | 11.0 | 19.4 | 13.5 | 21.1 | _ | 10.4 | 15.6 | 16.0 | 11.2 | 16.9 | 15.6 |
| 1961 ... | _ | 29.8 | 11.3 | 20.3 | 14.3 | 21.9 | _ | 11.6 | 16.0 | 18.0 | 11.8 | 17.6 | 16.7 |
| 1962 ... | _ | 27.0 | 12.3 | 20.7 | 14.9 | 22.8 | _ | 12.3 | 17.1 | 18.7 | 12.9 | 18.3 | 17.2 |
| 1963 ... | _ | 26.7 | 12.7 | 22.0 | 15.7 | 23.5 | _ | 12.6 | 19.7 | 19.8 | 13.1 | 18.9 | 17.0 |
| 1964 ... | _ | 26.7 | 12.5 | 23.5 | 15.6 | 23.7 | _ | 12.6 | 20.7 | 20.9 | 13.2 | 19.1 | 17.0 |
| 1965 ... | _ | 27.1 | 13.6 | 24.8 | 16.5 | 24.0 | _ | 13.0 | 19.9 | 22.0 | 13.8 | 19.6 | 18.0 |
| 1966 ... | _ | 28.7 | 13.6 | 25.6 | 17.9 | 23.5 | _ | 13.6 | 19.5 | 23.0 | 14.5 | 20.6 | 18.9 |
| 1967 ... | _ | 29.9 | 13.5 | 26.5 | 18.5 | 23.7 | _ | 13.5 | 20.5 | 23.8 | 15.6 | 21.1 | 18.3 |
| 1968 ... | _ | 30.2 | 14.1 | 25.9 | 17.4 | 24.2 | _ | 13.4 | 20.3 | 23.5 | 16.2 | 20.9 | 15.9 |
| 1969 ... | _ | 31.0 | 14.6 | 25.9 | 18.8 | 23.1 | _ | 13.9 | 21.3 | 24.3 | 16.4 | 21.1 | 16.9 |
| 1970 ... | _ | 34.8 | 15.5 | 27.0 | 20.3 | 23.0 | _ | 17.1 | 24.4 | 25.7 | 17.6 | 23.1 | 19.2 |
| 1971 ... | _ | 36.1 | 17.4 | 29.9 | 22.1 | 24.5 | _ | 19.3 | 28.1 | 28.8 | 19.9 | 25.3 | 21.3 |
| 1972 ... | _ | 37.8 | 21.0 | 35.0 | 24.1 | 28.2 | _ | 21.9 | 30.8 | 33.3 | 22.7 | 28.9 | 23.8 |
| 1973 ... | _ | 38.6 | 26.3 | 42.4 | 30.7 | 34.4 | _ | 28.0 | 33.5 | 41.3 | 27.6 | 33.1 | 24.8 |
| 1974 ... | _ | 45.2 | 31.2 | 49.5 | 35.6 | 36.9 | _ | 31.5 | 36.8 | 47.6 | 32.5 | 36.7 | 28.0 |
| 1975 ... | _ | 51.8 | 34.8 | 60.9 | 40.9 | 48.8 | _ | 35.1 | 47.9 | 58.7 | 41.5 | 47.4 | 36.1 |
| 1976 ... | _ | 56.6 | 35.3 | 60.9 | 41.8 | 47.3 | _ | 34.4 | 41.1 | 56.5 | 44.8 | 52.0 | 32.6 |
| 1977 ... | 61.2 | 54.7 | 41.5 | 67.6 | 45.7 | 49.3 | _ | 39.6 | 44.8 | 61.3 | 50.8 | 56.4 | 35.3 |
| 1978 ... | 65.3 | 53.5 | 54.6 | 77.8 | 54.1 | 58.1 | _ | 47.6 | 50.4 | 70.7 | 55.5 | 60.1 | 44.6 |
| 1979 ... | 70.7 | 57.8 | 51.3 | 84.2 | 60.3 | 66.5 | _ | 53.6 | 57.0 | 78.0 | 56.2 | 63.3 | 58.3 |
| 1980 ... | 78.8 | 65.3 | 51.8 | 88.3 | 58.9 | 76.8 | _ | 59.6 | 62.0 | 82.3 | 63.9 | 70.2 | 77.9 |
| 1981 ... | 82.4 | 69.5 | 55.2 | 70.6 | 50.4 | 67.1 | _ | 49.9 | 55.1 | 66.9 | 61.3 | 65.1 | 74.8 |
| 1982 ... | 87.9 | 77.2 | 49.2 | 57.2 | 46.7 | 61.6 | _ | 49.3 | 53.6 | 65.3 | 58.2 | 54.4 | 67.4 |
| 1983 ... | 86.0 | 77.5 | 52.3 | 51.0 | 43.4 | 57.4 | _ | 46.7 | 53.3 | 59.3 | 54.7 | 46.1 | 58.2 |
| 1984 ... | 85.6 | 71.2 | 52.2 | 46.8 | 40.8 | 53.5 | _ | 42.4 | 48.4 | 49.8 | 50.5 | 44.0 | 52.6 |
| 1985 ... | 87.3 | 68.7 | 50.3 | 46.9 | 42.3 | 54.2 | _ | 41.7 | 47.5 | 48.7 | 50.8 | 46.1 | 54.0 |
| 1986 ... | 91.2 | 70.4 | 75.2 | 63.4 | 60.0 | 72.1 | _ | 58.5 | 62.4 | 67.3 | 65.3 | 59.2 | 64.0 |
| 1987 ... | 86.9 | 75.1 | 85.0 | 77.2 | 77.9 | 84.6 | _ | 74.9 | 74.1 | 83.2 | 77.5 | 69.6 | 75.8 |
| 1988 ... | 86.7 | 83.6 | 93.2 | 77.0 | 79.0 | 82.9 | _ | 76.9 | 75.6 | 83.2 | 86.1 | 75.4 | 83.0 |
| 1989 ... | 90.5 | 89.8 | 87.1 | 72.3 | 72.6 | 77.6 | _ | 73.0 | 76.2 | 75.5 | 82.9 | 76.8 | 78.6 |
| 1990 ... | 93.7 | 95.6 | 83.8 | 89.5 | 91.3 | 94.1 | _ | 87.3 | 93.8 | 88.9 | 95.0 | 91.3 | 92.6 |
| 1991 ... | 97.6 | 105.1 | 91.7 | 92.3 | 90.8 | 93.1 | 87.6 | 87.8 | 97.6 | 89.8 | 95.7 | 96.3 | 98.3 |
| 1992 ... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1993 ... | 100.6 | 91.4 | 115.4 | 95.1 | 93.2 | 95.6 | 98.6 | 99.4 | 81.8 | 96.8 | 88.3 | 67.7 | 85.3 |
| 1994 ... | 98.5 | 83.4 | 125.9 | 94.2 | 88.3 | 92.9 | 98.2 | 99.8 | 78.1 | 92.8 | 90.7 | 63.1 | 86.5 |
| 1995 ... | 94.8 | 84.1 | 131.7 | 105.2 | 101.1 | 100.6 | 114.2 | 115.5 | 78.0 | 103.0 | 105.0 | 71.1 | 91.7 |
| 1996 ... | 93.5 | 85.0 | 109.6 | 98.3 | 105.0 | 99.2 | 111.5 | 111.6 | 87.8 | 98.6 | 107.1 | 79.6 | 92.6 |
| 1997 ... | 91.9 | 83.6 | 97.7 | 81.2 | 93.1 | 83.6 | 94.0 | 93.5 | 81.3 | 85.9 | 101.0 | 68.3 | 99.3 |
| 1998 ... | 92.5 | 80.5 | 92.4 | 80.0 | 92.6 | 83.2 | 93.5 | 89.1 | 78.6 | 85.2 | 100.0 | 66.5 | 104.5 |
| 1999 ... | 90.3 | 79.8 | 102.4 | 76.9 | 94.1 | 79.6 | 90.1 | _ | 75.9 | 82.4 | 102.2 | 63.6 | 102.0 |

[1] Compensation adjusted to include changes in employment taxes that are not compensation to employees, but are labor costs to employers.

Dash indicates data not available.

NOTE: The data relate to employees (wage and salary earners) in Belgium, Denmark, and Italy; and to all employed persons (employees and self-employed workers) in the other countries.